

TIME

Star Wars

The complete guide to *The Phantom Menace*

- GEORGE LUCAS talks to Bill Moyers about
the spiritual side of the Force
- EXCLUSIVE PICTURES from the movie

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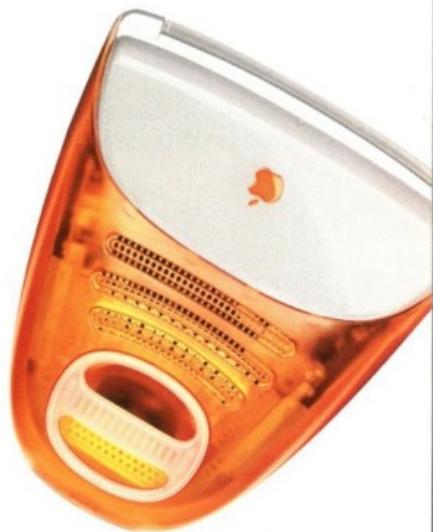
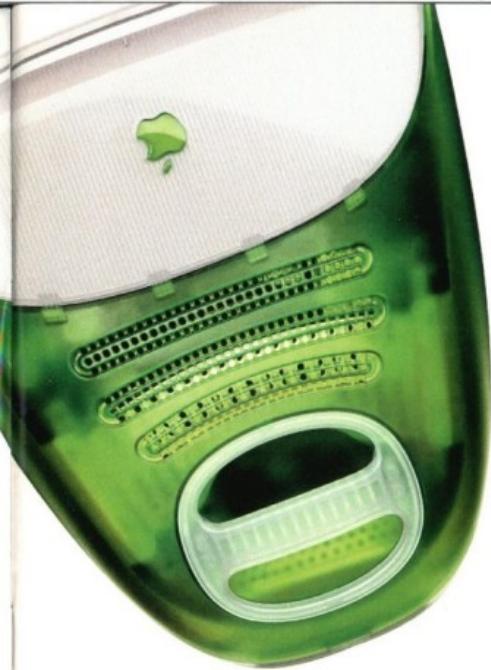


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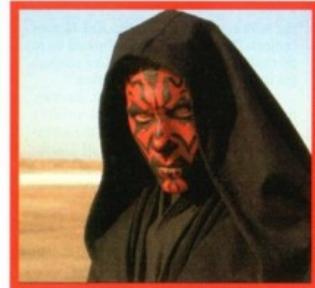
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Misfirings: A passenger train hit by a NATO bomb (see KOSOVO CRISIS)



That Galaxy Far, Far Away: Darth Maul is the face of evil in the new *Star Wars* (see COVER)



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COVER: Left to right, Ewan McGregor as Obi-Wan Kenobi, Jake Lloyd as Anakin Skywalker, and Liam Neeson as Qui-Gon Jinn. Image is a digital photomontage. Photographs © Lucasfilm Ltd. All rights reserved.

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TO OUR READERS

A New Generation of Heroes for the Planet



TODAY'S CHILDREN—born into disposable diapers, weaned on throwaway juice boxes and spoon-fed from single-serving snack cups—are avid consumers of the culture of convenience.

But theirs is also the first generation to learn the three Rs of environmentalism (reduce, recycle, reuse), right along with the more traditional Rs of grade school.

Their precocious commitment to the environment can be credited in large measure to an international legion of educators dedicated to instilling Earth appreciation in young people. This week, in a special 13-page report, we feature leading environmental educators, along with some of the enterprising youngsters they have inspired. The report coincides with Earth Day and is the latest installment of our continuing environmental series, *Heroes for the Planet*.

Also arriving in time for Earth Day in schools across America is a special issue of *TIME FOR KIDS*, *TIME*'s classroom magazine. The issue is the culmination of an effort begun in the fall, when TFK issued a challenge to its readers in Grades 4 through 6. This challenge was not for the homework faint-of-heart: students were asked to conceive, plan and execute a project that would improve some aspect of the environment in their community. TFK promised to publish a report on standout projects in the last of its three-part series of environment-themed special issues, produced with the support of Ford Motor Co.

"We try to give kids ownership of the world every week in *TIME FOR KIDS*," says Martha Pickerill, TFK's assistant manag-

ing editor, who oversaw the Kid Heroes project. "This special issue allowed us to do that even more directly. Our readers got the chance to really take action."

Scores of kids did just that. Entries, many illustrated and written in a child's hand, funneled in from across the country, describing a wide range of Earth-friendly enterprises.

Another successful project was the brainchild of a fourth-grade class in Lake Isabella, Calif. The class had been studying trout, an integral but beleaguered species in the area. To educate their community and tourists about the fish's plight, students built a model trout stream, complete with signs describing the trout's life cycle. Their handiwork will now welcome and enlighten thousands of visitors each year.

In Carol Stream, Ill., fourth-graders found a new use for their discarded sneakers: recycled-rubber playground surfaces. Meanwhile, their peers in Knoxville, Tenn., built 17 bird feeders and drew wildlife to an urban area formerly devoid of birds and squirrels.

One of the most ambitious responses to TFK's challenge came all the way from Guaynabo, P.R. Third-graders there planted more than 1,500 trees and flowers in areas that had been devastated by Hurricane Georges. "What I liked about our project," says Nicole Rodriguez, 8, "is that planting makes people feel proud, and we get other kids to join in."

That kind of pride will inspire kids to continue caring for the environment well into adulthood, says Pickerill. "These kids have the confidence and knowledge to carry

the torch of environmental education," she says. "They really believe in themselves and think they can make a difference."

We think so too.

Charles P. Alexander

Charles P. Alexander
Editor, *Heroes for the Planet*



NEW JERSEY A class used Christmas trees to slow beach erosion



TENNESSEE Kids built feeders, and the birds came flocking



PUERTO RICO Kids replaced trees lost in Hurricane Georges



ILLINOIS Fourth-graders recycled their sneakers into rubber playground surfaces

In the oceanside town of Margate, N.J., children recycled Christmas trees as a means to stave off beach erosion. They planted castoff trees in a trench along the beach, which trapped wind-blown sand and anchored a new sand dune. "The trees were heavy, and some were bigger than me!" recalls fourth-grader Jim Abbott. When fierce nor'easters rushed across the beach, the dune built by kids and bolstered by balsam firs held up, while nearby dunes washed away.

Mom used to say,
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Eric Pooley/Claremont, N.H.

In a Contrary State, an Underdog Has His Day

Bill Bradley finds his voice—and a surprise beachhead in New Hampshire

BILL BRADLEY'S LEATHER shoes are cracked, and his suit and tie—as he makes a point of telling me at a doughnut shop on Claremont, near the Vermont border—are suffering through their second straight campaign day. For the former New Jersey Senator, an insurgent trying to grab the Democratic nomination from Al Gore, genteel shabbiness signifies authenticity. Bradley wants you to know he's got bigger things—purer things—on his mind, and the doughnut shop is packed with people who have come to hear about them (and a few who just want coffee and crullers). Ten months before the primary, voters still outnumber reporters at events like this; the process hasn't yet become ghastly and surreal, and Bradley works the room happily, then talks about why he's running—to restore trust, clean up the political money game and use our prosperity to help the 1 in 5 children growing up poor. "This economy's so good we have no more excuses," he says. "These are the issues I'm fighting for. I don't have Air Force Two out there; I don't have the Secret Service. But I do have those of you who came out to Dunkin' Donuts on a Sunday morning to see me. Some of you might have known me when I was in short pants"—his years as a basketball star—"but I'm in a different place now, and I'm asking for a different level of trust."

His big ideas are meant to contrast with the poll-tested, bite-size notions Gore has been promoting lately (a telephone

hot line for traffic-jam updates, an airline passenger's bill of rights), but Bradley won't offer details or even hint at how he would get these big things done. ("Come fall, we'll be making a series of major proposals," he says.) For now, at least, people don't seem to

the stump; after his thoughtful speech at the state party convention in Manchester, an intermission named Dick Tartow, 67, who had volunteered for Gore just two weeks before, yanked off his GORE 2000 button and replaced it with one that said BRADLEY FOR PRESIDENT. And at the doughnut shop, state representative Amy Robbins-Theroux, 34, is also having second thoughts about working for Gore. "People my age don't know much about Bradley," she says, "but I'd heard wonderful things, so I came to find out more. And I'm impressed."

Bradley may turn out to be too good for this world. He isn't running a campaign so much as testing a thesis: finding out

dog is clearly having more fun, coming from behind in a two-man race. (While Gore is stuck in the polls, Bradley has picked up 14 points since early March—and he raised \$3 million just last week). But it's too soon to think about winners and losers. For now, it's enough that someone in the race hasn't taken a poll, that someone spends his time talking about "seeing the goodness in your neighbor" and "making connections" and "feeling less lonely, less isolated, less fearful." If it sounds as if he's running for pastor rather than President, at times you can almost feel it working. At a spaghetti dinner in Keene, a fifth-grader named Leeanne Hamel stood and sang



At a Dartmouth-Princeton baseball game, Bradley displays his jock charm and talent for retail politics

mind. His call for reform has helped establish a beachhead in New Hampshire, a contrarian state famous for punishing front runners and lifting underdogs. Gore is the state's top 100 Democrats more or less locked up; after that, most folks are up for grabs. Some 400 have joined Bradley's New Hampshire campaign, and his events around the state draw full houses, though it's too early to tell the curious from the committed. He's performing well on

whether he can win without losing his soul. (Sounds corny, but that's the movie he has cast himself in.) When I suggest he's positioning himself just to the left of Gore, he makes me feel crass: "We've got to get beyond this political calculation game," he says, "and give somebody the benefit of the doubt that he's speaking from the heart."

Speaking from the heart is easy with the election months away and no one demanding specifics. But so far the under-

the national anthem. Her voice was sweet and clear, but she had trouble with the high notes, and her confidence broke. Bradley's voice came in to help, and then others, until finally the whole place was singing, led by Leeanne. When it was over, everyone cheered. The only smile bigger than Bradley's belonged to the young girl. That might not get him anywhere near the White House, but it counts for more than any political speech I've heard this year. ■

His "big ideas" are meant to contrast with the bite-size notions Gore is promoting

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Please see additional important information on adjacent page.
98250203/0267A9

Brief Summary of Prescribing Information as of April 1998

ALLEGRA®
(fexofenadine hydrochloride) Capsules
60 mg

INDICATIONS AND USAGE

ALLEGRA is indicated for the relief of symptoms associated with seasonal allergic rhinitis in adults and children 12 years of age and older. Symptoms treated effectively include sneezing, rhinorrhea, itchy nose/itchy throat, stuffy nose.

CONTRAINDICATIONS

ALLEGRA is contraindicated in patients with known hypersensitivity to any of its ingredients.

PRECAUTIONS

Drug Interactions

In two separate studies, fexofenadine hydrochloride 100 mg twice daily (orally or transdermally) was co-administered with hydroxyzine 500 mg every 8 hours or loratadine 400 mg once daily under steady-state conditions. In both studies, no clinically important pharmacokinetic interactions or adverse events or 25% increase in adverse events were observed when subjects were administered fexofenadine hydrochloride alone or in combination with hydroxyzine or loratadine, respectively. The findings of these studies are summarized in the following table.

Effects on Steady-State Fexofenadine Pharmacokinetics

After co-administration of hydroxyzine hydrochloride 100 mg Every 12 Hours (twice recommended dose) in Normal Volunteers (n=24)

Concomitant	C _{max} (hydroxyzine concentration)	AUC _{0-12H} (extent of systemic exposure)
Fexofenadine (500 mg every 8 hrs)	+82%	+109%
Ketotifen (400 mg once daily)	+125%	+164%

The mechanisms of these interactions are unknown, and the potential for interactions with other drugs has not been fully evaluated in controlled studies. These data were collected to verify the normal pharmacokinetic levels achieved in adequate and well-controlled clinical trials. Fexofenadine had no effect on the pharmacokinetics of hydroxyzine.

Carbamazepine, Metoprolol, Ingestion of Fatality

The carcinogenic potential and reproductive toxicity of fexofenadine hydrochloride have not been determined. In a 2-year study, fexofenadine exposure based on plasma area-under-the-curve (AUC) values, no evidence of carcinogenicity was observed when mice and rats were administered fexofenadine hydrochloride orally at doses up to 240 times, respectively, those doses resulted in plasma AUC values of approximately 100 times the human therapeutic dose. In a 2-year study, fexofenadine was equal to or greater than 3 times the human therapeutic dose (based on a 60-mg twice-daily fexofenadine hydrochloride dose).

In-vitro Mutagenicity Assays In-vitro (Bacterial Reverse Mutation, CHO-Hprt, L5178Y, Forward Mutation, and the Chinese Hamster Ovary Cell Transformation Assay) and the Ames Test (Mutatox™), fexofenadine hydrochloride revealed no evidence of mutagenicity.

In rat teratogenesis, dose-related reductions in implants and increases in gestation-spacings were observed at oral doses equal to or greater than 10 times the human therapeutic dose. In a 13-week study, fexofenadine that were equal to or greater than 3 times the human therapeutic dose (based on a 60-mg twice-daily fexofenadine hydrochloride dose).

Pregnancy Effects: Category C There was no evidence of teratogenicity in rats or rabbits at oral therapeutic doses up to 300 mg/kg. These doses produced plasma AUC values based on a 60-mg twice-daily fexofenadine hydrochloride dose.

There are no adequate and well-controlled studies in pregnant women. Fexofenadine hydrochloride should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers Dose-related decreases in pup weight gain and survival were observed in rats exposed to oral doses equal to and greater than 150 times the human therapeutic dose. The doses of fexofenadine that were equal to or greater than 3 times the human therapeutic dose (based on a 60-mg twice-daily fexofenadine hydrochloride dose).

Hormonal Effects There are no adequate and well-controlled studies in women during lactation. Decreased milk production has been reported in some mothers when fexofenadine hydrochloride is administered to a nursing woman.

Pediatric Use

Safety and effectiveness of ALLEGRA in pediatric patients under the age of 12 years have not been established. Across well-controlled clinical trials in patients with seasonal allergic rhinitis, a total of 209 patients between the ages of 6 and 11 years received fexofenadine hydrochloride 100 mg twice daily up to four doses. Adverse events were similar in this group of patients to the patients above the age of 12 years.

Geriatric Use

In placebo-controlled trials, 42 patients, age 60 to 68 years, received doses of 100 mg twice daily. The adverse event profile was similar. Adverse events were similar in this group to patients aged 60 years or older.

ADVERSE REACTIONS

In placebo-controlled clinical trials, which included 1481 patients receiving fexofenadine hydrochloride doses of 20 mg to 240 mg twice daily, adverse events were similar in fexofenadine hydrochloride and placebo-treated patients. The most frequently reported adverse events were those related and was similar across subgroups defined by age, gender, and race. The percent of patients who withdrew prematurely because of adverse events was similar in fexofenadine hydrochloride and placebo groups. The most adverse events that were reported by greater than 1% of patients who received fexofenadine hydrochloride were headache (1.3%), nausea (1.3%), and that were more common with fexofenadine than placebo. These are listed in the following table.

Adverse Events in Placebo-Controlled Seasonal Allergy Rhinitis Clinical Trials at Rates of Greater Than 1%

	Fexofenadine 60 mg (n=479)	Placebo (n=477)
Adverse Experience		
Viral infection (cold, flu)	2.5%	1.5%
Nausea	1.3%	0.3%
Dyspepsia	1.3%	0.3%
Drowsiness	1.3%	0.3%
Tiredness	1.3%	0.3%
Vaginal	1.3%	0.3%

Adverse events occurring in greater than 1% of fexofenadine hydrochloride-treated patients, yet may not be causally related to the medication, include headache, and throat irritation.

The frequency and magnitude of laboratory abnormalities were similar in fexofenadine hydrochloride and placebo-treated patients.

Prescribing Information as of April 1998

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U P D A T E

He Found His Girls

Hidden abroad by their mom, two kids are now snatched back by Dad

HE HAD SPENT \$3.2 MILLION OF HIS fortune, hired private investigators on four continents, attracted about a \$2 million reward and turned his suburban Philadelphia mansion into an international command center—all in hope of tracking down the two young daughters abducted by his ex-wife.

In the end, after 22 months of false leads and dashed hopes, it was as simple and dramatic as this: Bipin Shah, 59, got a call from one of his private eyes in Europe. Sarah Lynn, 9, and Genevieve ("Vivi") Marie, 7, had been found living in Lucerne, Switzerland, with their mother, Ellen Dever, 43, under assumed names.

He flew to Milan, met with his team of sleuths and mapped out a bold maneuver. And then on Saturday, April 10, in a wrenching scene on a Lucerne street, the girls were plucked like flowers from their mother's side. Their secret lives ended as abruptly as they had begun—whisked away by car as their mother screamed for them.

The next day, Shah took his daughters home and put them under the care of psychologists. The girls were "very angry. It took a little while, but they calmed down," Shah says. "They have mixed feelings because their mother is not here."

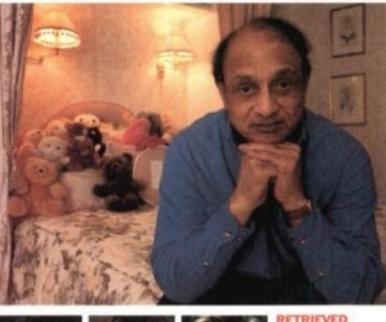
Shah says he phoned his ex-wife's father and asked, "Would you please call Ellen and tell her not to panic? I know how she feels because I know how I felt when it happened to me." Dever, according to her Swiss attorney, Joerg Blum, "is O.K., but of course very upset and anxious."

Although Dever had not returned to her Lucerne apartment for fear of arrest on U.S. child-concealment charges, Shah said, he has been in touch with her by phone and has put the girls on to talk with their mother. He said he has told Dever that "we'll work it out. We are going to put our egos aside and do what's right for the girls."

Shah and Dever, subjects of a TIME

cover story last May, had met in 1981 at Philadelphia Bank where both worked, he as a star developer of automated-teller systems. After they married, Shah started his own company, which he and his partners later sold for \$200 million. The couple became socially prominent in Philadelphia's old-money Main Line suburbs.

But their marriage was coming apart, and it ended in divorce. He accused her of infidelity, and she later accused him of physically abusing her. Shah denied her allegations, but they exacerbated a custody battle that led Dever to seek out the controversial Faye Yager, an Atlanta woman who has helped alleged abuse victims disappear into an international underground.



RETRIEVED
Genevieve, far left, now 7, and Sarah, now 9, hidden away by mom Ellen Dever, are back with dad Bipin Shah

Shortly after her contact with Yager, Dever and her daughters vanished. Shah then won custody of the girls in court, and Dever was charged with child concealment and unlawful flight to avoid prosecution.

Shah tried last week to make up for lost time with his daughters, who can now speak German and Italian. And lawyers on all sides searched for a resolution that might restore some normalcy to their lives. Shah said he doesn't want Dever jailed or kept away from the girls. "I would never deprive my children of their mother. No one has that right."

—By Steve Lopez

Business
INTERCONTINENTAL

Alone at last.



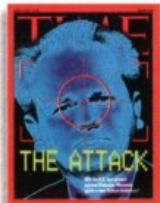
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LETTERS



Taking on the Serbs

"The bait has been taken: NATO and the U.S. are headed down the slippery slope of ever increasing commitment in Yugoslavia."

CHARLES GARNER
Greensboro, N.C.

I HAVE NEVER BEEN PROUDER OF BILL Clinton and the U.S. military than now, for standing up to Balkan bully Slobodan Milosevic in order to stop the systematic murder of ethnic Albanians [KOSOVO CRISIS, April 5]. After Hitler exterminated 6 million Jews, the West said it would never let such a tragedy occur again. Well now is the time to back up that promise, because it is happening again.

Lynn Capenhart
San Diego

DESPITE MICHAEL DUFFY'S AIR OF RIDICULE in describing Clinton's belief in the efficacy of conflict resolution, this is the only lasting way of resolving the situation in Kosovo. The use of armed conflict to settle differences throughout the centuries is what has led to the current situation. Fighting has not brought a lasting peace; it never will. War means winners and losers, and losers mean bitterness and desire for revenge. With war come death and destruction and children's growing up without parents and siblings, scarred and fearful. War perpetuates further acts of violence. The cycle is endless.

ANNA CASSILLY
Chapel Hill, N.C.

I AM ASHAMED THAT THE U.S. GOVERNMENT and our allies are committing the same genocide against the people of Yugoslavia as the Serbs have been accused of carrying out against the Albanians in Kosovo. The massacre of innocent Serbs under NATO's so-called humanitarian mission must stop. Milosevic may have done wrong, but the NATO forces are doing wrong as well.

RAM KOUSSA
Rockwall, Texas

CLINTON IS MAKING THE SAME MISTAKE Lyndon Johnson made in Vietnam in supposing that bombing will force a rational response from an irrational person. Assuming a dictator will act in the best interest of his nation's people is an

error of judgment the West keeps making. Milosevic, like Ho Chi Minh, sees the struggles of his countrymen only as the means to achieve an ethnically pure nation. The bait has been taken: NATO and the U.S. are headed down the slippery slope of ever increasing commitment in Yugoslavia.

CHARLES GARNER
Greensboro, N.C.

IF ONE SUBSTITUTES 1999, MILOSEVIC, ethnic Albanians and Yugoslavia for 1939, Hitler, Jews and Germany, your article could have appeared in my history textbook covering World War II. Milosevic may not want to control all of Europe, but he does have the will to fight for Kosovo. If America and Europe do not have the will to expel Milosevic, then this region will once again be the birthplace of a world war.

DON C. TYLER
Fort Wayne, Ind.

THE U.S. DOES NOT WANT TO BE THE world's policeman, but if there is ever to be peace, then action must be taken to ensure this goal. It is proper that the U.S., as the most powerful nation in the world, with high ideals of human rights, lead efforts to preserve peace. America's actions in Kosovo to protect the Albanians, a Muslim people, from genocide and abuse of their human rights show a commitment to a just and peaceful world without any bias of race, religion or nationality.

DWIGHT M. GOWDEY
Seattle

NO PEOPLE WOULD APPROVE AGGRESSION against my country, Yugoslavia, if they had the right information about what's going on here. How can one explain dropping bombs near schools and hospitals or killing an old man in his cottage in the middle of nowhere? Who will build new houses for the ethnic Albanians and Serbs or give them new jobs in a poor

country such as Yugoslavia? I fought hard against the Milosevic regime for years, and I still strongly believe in democracy. Unfortunately, the bombs NATO drops on my country are striking the Serbian democratic movement.

VLADIMIR STAJIC
Zemun, Yugoslavia

THE PROBLEM WITH THE U.S. AND NATO leaders is that they talk too much. Their strategies are thus exposed to the enemy. Material advantage is not a guarantee of success. The Yugoslavs and Russians are excellent chess players. While Russia is not directly involved in the war, Russian advisers may be giving their Yugoslav brethren practical pointers in order to win endgames.

NESTOR ALMAZAN
Mississauga, Ont.

WHAT THE SERB ARMY HAS DONE TO THE Albanian Kosovars is terrible. However, the bombs that NATO drops do not discriminate between Serb and Albanian. Those who suffer more from the NATO attack are not the Serb leaders but the innocent Serb civilians, who watch their

HIGHFALUTIN VERBIAGE

Amy Musher's Mailbag [LETTERS, March 29] gave some recent examples of the magazine's use of unusual words. She noted that a reader called these "elitist bomfogs," adding "whatever that means." A few readers were quick to tell us about BOMFOG, a term of distinguished political parentage. Steve Langley of Fremont, Calif., informed us,

"In Nelson Rockefeller's 1964 presidential campaign, he often ended his boilerplate stump speech with the phrase 'the brotherhood of man under the fatherhood of God.'

Reporters called this the BOMFOG signal, which alerted them to dash back to the press buses." Adds Langley: "BOMFOG has now acquired a meaning along the lines of 'highfalutin verbiage.'" Joan Guck of New York City also filled us in on BOMFOG, but came up with a new locution: "I suppose the p.c. term today would be SOWMOG, for the sisterhood of women under the motherhood of God."



BOMFOG



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homes, bridges and the factories where they work being destroyed. With these attacks, NATO is uniting the Serb people under Milosevic. Now it will be impossible to overthrow this dictator.

ANGELO GAITAS
Athens

FROM IRAQ TO MONICA LEWINSKY, AND now in Yugoslavia, President Clinton has shown an amazing inability to think of the long-term consequences of his actions. The only results we may see of the actions in Yugoslavia are an increase in the suffering of Kosovar Albanians and a rise in anti-American feeling around the world.

OPOONDO WANYAMA
Francistown, Botswana

The Clinton Doctrine

I READ WITH GREAT INTEREST AND SADNESS Charles Krauthammer's commentary "The Clinton Doctrine" [ESSAY, April 5], in which he quoted a foreign policy expert's description of managing the "teacup wars" of the world and the "uncivil civil wars" of nation-states. The interest came from its facts and logic, the sadness from the doctrine's "highfalutin moral principles [that] are impossible

guides to foreign policy" and the inevitable wavering between the deplorable poles of hypocrisy and naivete. After reflection, however, I find that both President Clinton and Krauthammer are correct. The Kosovo affair seems like the pursuit of knowledge. One ought to gain some new learning and put it to use. But omniscience and omnipotence are beyond human capacity.

MIKE M. BEHESHTI
North Salt Lake, Utah

KRAUTHAMMER'S ILL-CONSIDERED ESSAY belies his usual knee-jerk hostility toward everything Clinton does. Krauthammer claims that the President meant for his "doctrine" to be "universal," and then the author unwittingly cites cases of U.S. nonintervention that disprove this claim. In fact, Clinton has never said the U.S. seeks to stop all humanitarian abuses in the world. And just because a goal is not fully obtainable doesn't mean it is not worth pursuing. Clinton's policy in the Balkans may be too reactive, but it would indeed be immoral not to stop Milosevic's rapes and murders by any means possible, including sending in ground troops.

BLAKE WU
Coralville, Iowa

KRAUTHAMMER CAUGHT CLINTON'S FOREIGN policy dead center and crystallized what I feel: we Americans are experiencing self-righteous delusion.

DAISY SPEARS STROUD
Charlotte, N.C.

Guilty Verdict for Dr. Death

ALTHOUGH PHYSICIAN JACK KEVORKIAN claims that his acts of euthanasia were carried out in response to requests from those who were suffering [NATION, April 5], I still believe it is an inhumane act to aid a person in his own death, regardless of consent. And I was quite impressed by your article, for it lays down the facts while expressing the views of Kevorkian boldly and concisely.

JEFFREY PARK
Berkeley, Calif.

GRANDPA IS SLOWLY DYING, TOO SLOWLY. Excruciating pain. Medications no longer effective. Bladder, bowels, lungs are all tubed up; he's wired like a switchboard and totally helpless. His rolling eyes have begged, implored for merciful release, pleading. "I've had enough. Help! Let me go!" But no, 67% of Oregon doctors still say, "Sorry, pal, we can't violate our 'Do no harm' oath!" Those doc-

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tors don't get it. Can't they see that by their very refusal they are prolonging suffering and doing harm?

NANCY L. FOX
Talent, Ore.

Those Lying Eyes

I AM APPREHENSIVE ABOUT THE ADVANCES being made in developing computers with the ability to read facial expressions and possibly detect a lie [SCIENCE, April 5]. In the early stages of development these machines may merely "read" facial expressions, but they will no doubt bring about the creation of even more sophisticated interactive computer behavior instruments. Imagine our future—it will be similar to scenes in the writings of Aldous Huxley and George Orwell. Will

SIC 'EM, ROVER!



Yep, it's a dog's world all right—at least to judge by our readers' reaction to Joel Stein's piece "Why I Hate Dogs" [NOTEBOOK, April 5]. We heard from about 75 people (and a couple of dogs) who suggested a variety of treatments for Stein, ranging from a visit to the dog pound to long-term therapy. And dog lovers strongly demanded more considerate behavior from Stein. Michelle Chioldi of Gurnee, Ill., summed up the views of many of dogdom's friends: "Dogs give a confirmation that no matter what happens, someone is there who simply loves you and always will."

Donna Sullivan of Brookfield, Mass., however, went into attack mode: "What a pathetic man Stein must be. He wouldn't recognize love if it bit him in the ass." Stein did have a few defenders, among them a woman who recalled the "ultimate gross-out" when a friend cooked dinner while feeding her dog with bare hands between the culinary chores. And could revenge be in the air? From San Francisco, Suzanne Moors noted, "Animals can always tell when someone dislikes them. How I wish I could be in Central Park with the dog population when Stein strolls by. I can just see him rolling on the ground with man's best friend in you-know-what. How deserving!"

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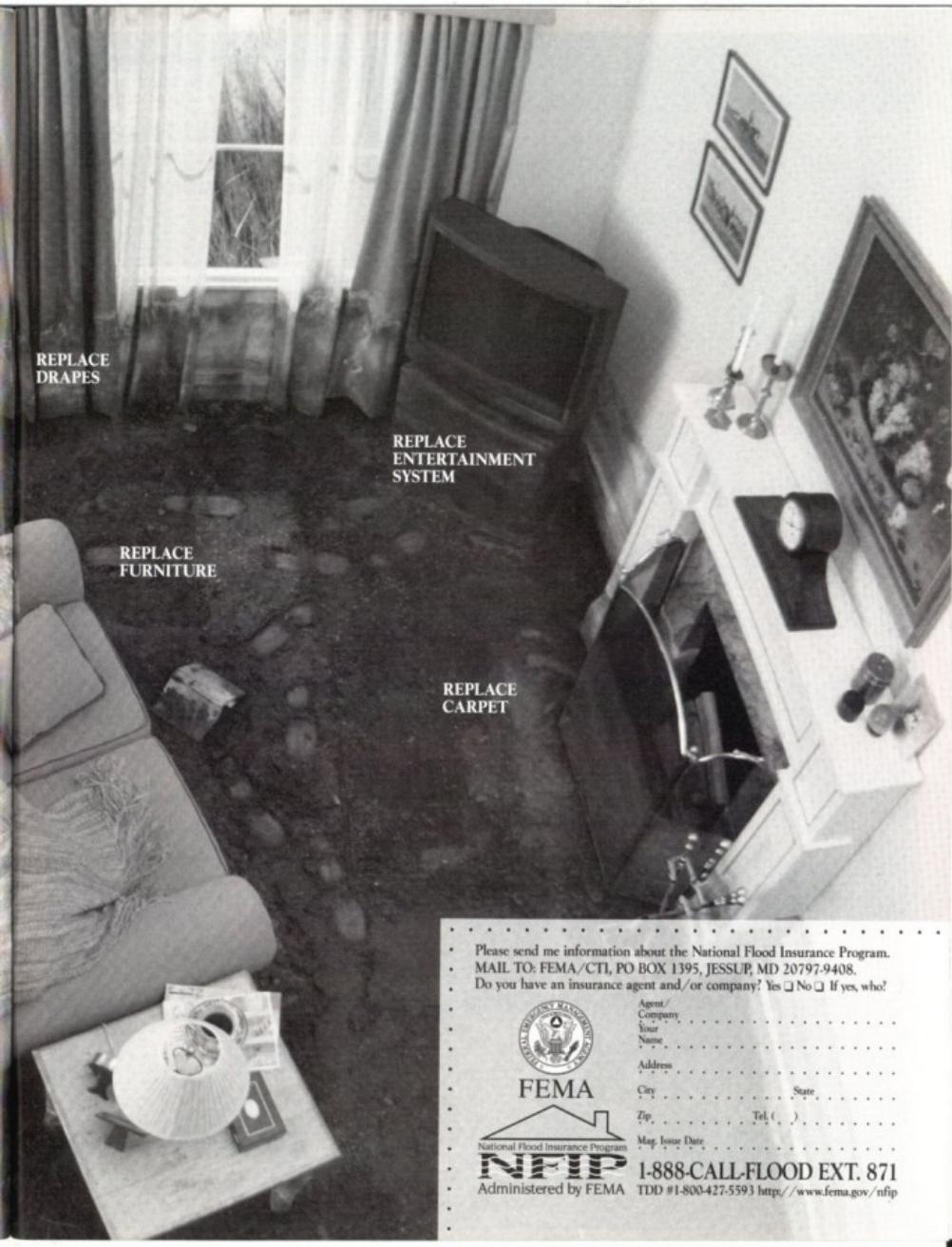
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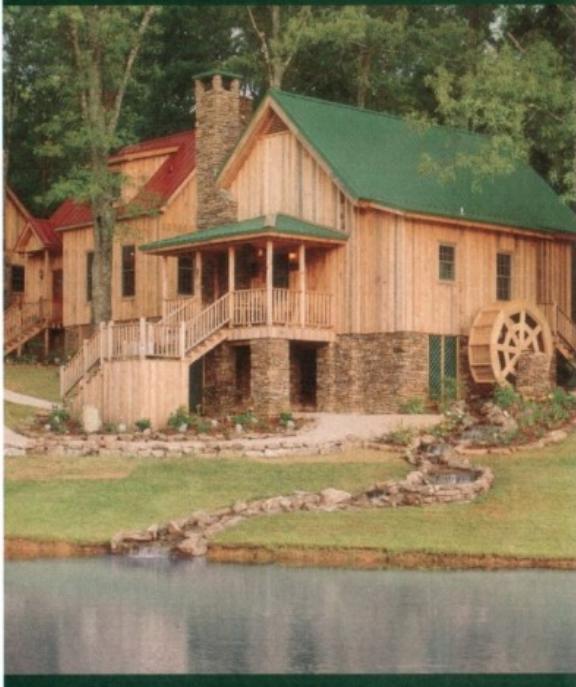
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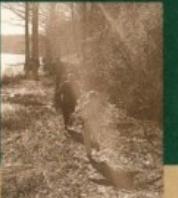


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the day come when trust becomes nonexistent, and we depend on computers to feed us our truths?

SETH ERICKSON
Jacksonville, Fla.

Resolving a Trauma

DAVID VAN BIEMA'S ARTICLE ON HOW forgiveness could be good for your health [RELIGION, April 5] might leave readers with the impression that unconditional forgiveness is the only route to peace or mental health, and that the only alternative is vindictive hatred and eternal bitterness. On the contrary: deciding not to forgive can also be a healthy choice. Resolving a trauma is what counts, and there is no one-size-fits-all solution.

JEANNE SAFER
New York City

Truth-Ometer for Candidates?

BRAVO TO TIME FOR EXPOSING THE TRUTH behind presidential candidates' statements in your feature "Candidate Truth Watch" [NOTEBOOK, March 29]. I would also like to know when a candidate

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understates his or her achievements. Too often, people running for office try to portray themselves as something they are not. Don't they realize that the public would much rather hear honest statements and anecdotes? We'll vote for them on the basis of who they are, not who they aspire to be or wish they were.

CHERYL A. SACEK
Salt Lake City, Utah

Much Ado About Nothing

MY HAT IS OFF TO STEVE LOPEZ FOR putting into words my very sentiments in his piece "Nothing Means Something" [STEVE LOPEZ, April 5]. I'm glad to know that I'm not the only one who thinks a little Y2K shutdown might not be so terrible. When I asked my 16-year-old what he thought of this essay, his reply was, "I wouldn't want to waste my life that way [doing nothing]." Mmmmm... I think the first night this spring that I walk outside to sit and listen to the frogs croaking in the distance, I'm going to unplug the computer and take my son with me!

LORI DUTTER
Cedar Grove, Wis.

THE TROUBLE WITH DOING NOTHING IS that you never know when you're done!

PHIL KIRCHER
Hopland, Calif.

Correction

IN AN ITEM ABOUT SEVERAL PRESIDENTS' announcements of military actions [NOTEBOOK, April 5], we mistakenly described some of the background accessories in Clinton's Oval Office as "campaign buttons." The array of small disks visible behind Clinton are not campaign buttons but special coins with the emblems and mottoes of various U.S. military units.

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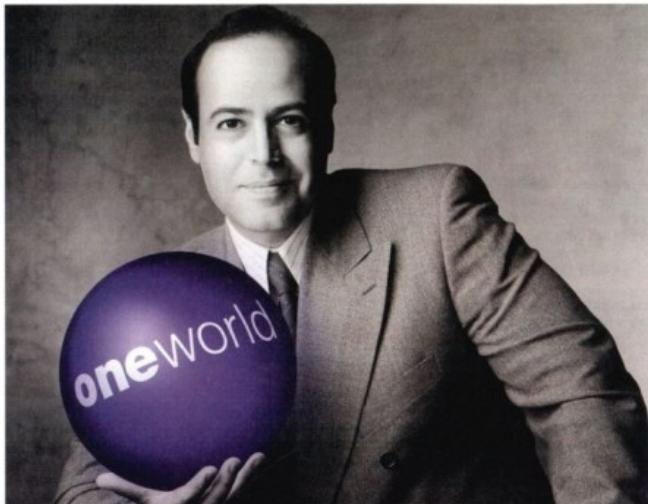
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NOTEBOOK

VERBATIM

"I can't understand the cretins who planned this operation. They say that they are against Milosevic, so why do they bomb me? You can be sure that Milosevic has a better shelter than any of us."

Branislav Jovic,
Belgrade resident

"I'm feeling free."

PRIME MINISTER ATAL BIHARI VAJPAEE OF INDIA,
after his government lost a vote of confidence by one vote

"We're certainly engaged in hostilities. We're engaged in combat. Whether that measures up to, quote, a classic definition of war, I'm not qualified to say."

WILLIAM S. COHEN,
the apparently underqualified Secretary of Defense, on whether or not we are at war with Yugoslavia

"Daily."

KENNETH STARR,
on how often he wishes he had taken the job Pepperdine University offered him halfway through his tenure as independent counsel

Sources: Jovic, Washington Post; Vajpayee, AP; Cohen, Senate Armed Services Committee hearing; Starr, Larry King Live



DAVID SALLE

LET'S HAVE A BLOWOUT PARTY What with Yugoslavia's putting a damper on spirits and the banana wars unresolved, Bill Clinton and Tony Blair are going to have to sweat to keep NATO's 50th-anniversary celebrations from bombing

WINNERS & LOSERS



SUSAN McDOUGAL
Court acquits jailbird who would not sing; book publishers may find her more tuneful

WAYNE GRETZKY
No fireworks, no baseball stint, just a man who knows to quit while he has teeth to Bud

MATT MOSELY
Telegenic fire fighter performs daring rescue, urges bonus for his union. Buy this guy a Bud!

KENNETH STARR
Opposes independent counsel law, although it made his name. After \$40 million, now you tell us?

DEE DEE MYERS
As Belgrade burns, former White House flack sits on Hollywood Squares. Exit plan simple: X or O

BENAZIR BHUTTO
Ex-leader of Pakistan gets five years in prison for corruption. She forgot to bribe the judge



AP/WIDEWORLD

KOSOVO

Clinton's View: NATO Spoke Rashly, Unwisely

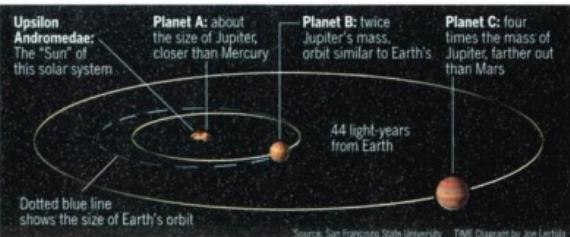
THE WHITE HOUSE IS PRIVATELY FURIOUS at how NATO commander General **WESLEY CLARK** first handled reports that one of his jets had mistakenly attacked a refugee convoy last week. Within hours of the Wednesday strike, which may have killed more than 70 ethnic Albanians, Clark told a news service he had "strong evidence" that Serb forces had fired at the refugee column. By the next day, embarrassed NATO officials admitted that their first claim was wrong and that an American F-16 had indeed attacked civilians. NATO

tried to recover, releasing an audiotape of an F-16 pilot who may have struck the civilian convoy. He described how he thought he was attacking Serb military vehicles. The tape only added to the muddle. Pentagon officials, some of whom still suspect that Serb forces killed the civilians, now say that the pilot was describing another military convoy he had struck. "It wasn't handled well," a senior Administration aide said of NATO's response to the tragedy. NATO knew there would be civilian casualties during the air war, and when they occurred, "we had all agreed we wouldn't jump the gun and say things" before knowing for sure who was responsible, said the aide.

Clark's gaffe handed Belgrade a propaganda windfall: a tragic accident that became a weeklong media flap over NATO credibility. —By Douglas Waller/Washington



General Clark



Source: San Francisco State University TIME Diagram by Joe Lentini

ASTRONOMY

New Real Estate in Space

SAVVY SPECULATORS MAY WANT TO LOOK into the new solar system found orbiting the star **UPSILON ANDROMEDAE** last week. Distant planets have been popping up for a few years, but always singly; this is the

SENATOR CLINTON?

The First Lady Gets into A New York State of Mind

HILLARY CLINTON WILL BE IN NEW YORK City for three days this week to talk about education and children's health, give awards to **DESMOND TUTU** and **KATIE COURIC**, raise money for Democrats—and no doubt fuel more speculation about her plans. Despite intriguing little gestures like the Long Island wine that was served at the official dinner for China's Zhu Rongji, the First Lady isn't expected to give a formal inkling of her decision on the New York Senate race un-



Mrs. Clinton

first time astronomers have found a group. One even has an Earthlike orbit, so it might be hospitable—except that it's bigger than Jupiter and probably made mostly of gas. It could have an Earthlike moon, however. If you can find a broker, better get your bid in early for a choice lot. —By Michael D. Lemonick/New York

til June. But her advisers say that the more she thinks about it—egged on in private by the Campaigner in Chief—the more she likes the idea. She's unfazed by polls showing her lead shrinking in a hypothetical match with New York Mayor **RUDY GIULIANI** and advice from her strategists that her chances are about even in a race that would be largely fought upstate and on Long Island. Says an intimate: "The upside are taking the balance right now." Meanwhile, Hillary's other post-White House options—running a university or a think tank, sitting on boards—seem stodgy by comparison. From all this comes one loud signal, intended not least for her own husband: "She's not interested in making money," says another friend. "That's his job now." —By Karen Tumulty/Washington

THE DRAWING BOARD



Not So Long Ago in a Beltway Not So Far Away

GEORGE LUCAS HASN'T EXACTLY BEEN known to feel the force of politics. Unlike his friend Steven Spielberg, *Star Wars* supremo Lucas doesn't make campaign contributions to the Democrats or, as far as we know, anyone. But could there be a heavy hint of party affiliation in his latest epic? Consider: *Star Wars Episode I: The Phantom Menace*, written in the mid-'90s and shot in scandal-filled 1998, opens with a hot-headed character named Nute (pronounced *Newt*), whose attack on the defenseless planet of Naboo has all the speed and surprise of the Republican revolution. Nute's ally in the Galactic Senate is known as Lott, and Lott's main aim is to tie up Naboo's call to arms in committee, allowing it to die a quiet death, à la campaign-finance reform.

The Senate, we are told, is "full of greedy, squabbling delegates who are only looking out for themselves and their own systems," while the elected leader of the Republic is powerless to stop them, having been "mired down by baseless accusations of corruption." Lest anyone doubt the meaning of this last line, Lucas made it crystal clear in conversations with Terence Stamp, who plays the hapless Galactic leader. After asking for some clues to his character, Stamp was told, "He's a bit like Clinton." *Primary Colors* was never this much fun.

—By Chris Taylor



Another *Newt*



The other *Lott*

Air Wars: Amanpour Strikes Back

As wars go, the Balkans conflict makes for pretty grim TV—few pictures of bombings-in-progress, sparse information from NATO



CBS EVENING NEWS

Rating

Kudos to **Dan Rather** for being the first network anchor in Belgrade. It may not be Baghdad live, but Gunga Dan is in his element. Kudos also to whoever chose the tag *Crisis over Kosovo* over the banal *Crisis in Kosovo*.

VIEWERS: 8.5 million



NBC NIGHTLY NEWS

Rating

Ron Allen looks as if he's dressed for a Ricky Martin video, not reporting a war. Maybe his snazzy disguise was the reason he was allowed to stay in Belgrade that day when other reporters were forced out.

VIEWERS: 10 million



ABC WORLD NEWS TONIGHT

Rating

While Jane Clayson sports the J. Crew look in Macedonia, her colleague **Morton Dean** blends in with the natives by dressing urban casual. The people in Belgrade seem to like this old-school, man-on-the-street reporter; so we do too.

VIEWERS: 9.5 million



CNN

Rating

Christiane Amanpour, formerly the sultry voice of the Gulf War, shines despite CNN's rather dry coverage. You know you've arrived when the Serbian media accuse you of "great, great evil."

VIEWERS: 575,000 (avg.)



MSNBC

Rating

John Hockenberry is suitably disheveled doing his talk show live—at 4 a.m. local time—from Tirana, Albania. Maybe he gloats a tad too much over the mud stuck to his wheelchair. You're tough. We know.

VIEWERS: 262,000 (avg.)



FOX NEWS CHANNEL

Rating

Since gutsy but shoestring Fox is relatively understated in the Balkans, its format centers on punditry. Amid all the bickering, **Tim Marshall** is sometimes just another voice in the wilderness.

VIEWERS: 136,000 (avg.)

IDOLS



HE SCORES! Last week so many sports stars got into trouble, it was as if they were competing. It seems appropriate, therefore, to inaugurate the *Pete Rose Chalice* for sporting miscreancy. The recipients are:

- Dennis Rodman, who was fired from the Los Angeles Lakers after being late to practice because, he said, he couldn't find his sneakers;
- University of Connecticut point guard Khalid El-Amin, who was arrested on marijuana charges;
- Yankee Darryl Strawberry, who is in treatment for cancer but was picked up for possessing cocaine and soliciting sex from an undercover cop.



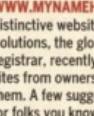
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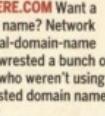
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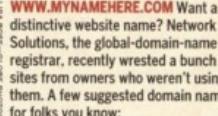
Bob Dole
Mariah Carey
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Dolly, the sheep
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Barbara Walters
Michael Jackson
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NATO



WWW.MYNAMEHERE.COM Want a distinctive website name? Network Solutions, the global-domain-name registrar, recently wrested a bunch of sites from owners who weren't using them. A few suggested domain names for folks you know:

JOEL STEIN

My Manliest Moment

HAVE PROVED MYSELF UNGIFTED IN EVERY ATHLETIC endeavor, and yet there's a part of me that watches pro sports and thinks, "I could have caught that." It was during one of those moments that I asked the people at the NHL to suit me up in goalie pads and let a player take slap shots on me. The strangest part was not that they said yes but that they required me to sign absolutely no legal waivers. This is a tough sport.

For advice and, I hoped, a convincing argument to back out of this arrangement, I called George Plimpton, who spent a season training as a goalie with the Boston Bruins for his 1985 book, *Open Net*. "Hockey players are the greatest cats on earth," he said Plimpton. He then recounted his own experiences and lacerations. "I envy you," he said. "You'll have a lot of fun. Maybe you won't have so much fun. I don't know."

Plimpton's advice, though kindly, didn't seem like quite enough, considering I don't know how to skate. So I scheduled a lesson at a local ice-skating rink with a guy who coached the Israeli Olympic figure-skating team, which seemed impressive until I really thought about it. Still, in half an hour, he taught me to skate backward, scuff up the ice in front of the goal, bang on the goal pipes with my stick and blame my equipment when I got scored on.

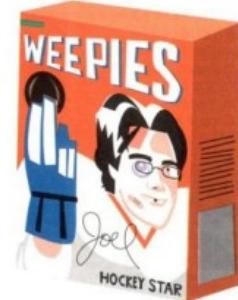
My other method of preparation took place the morning before the big event, when I ate Wheaties and put on my lucky shirt. Never having played sports seriously, I didn't actually have a lucky shirt, so I just picked one and called it lucky. If I didn't do well, I would just call it my unlucky shirt and

throw it away. I spent most of the morning on the shirt thing.

The NHL sent me to the practice facility of the New York Islanders, because while most teams were gearing up for the playoff season, which starts this week, the Islanders were gearing down for golf season. Their goalie, Felix Potvin, helped me put on four boxes' worth of equipment, which weighed 30 lbs. He then had Warren Luhning, a rookie forward, take shots on me. What I didn't realize was that Luhning had not yet scored an NHL goal and had a lot of pent-up aggression. This became obvious when he skated around the net with his arms in the air after scoring an 80-m.p.h. slap shot on me. Potvin thought that was overdoing it.

After 20 minutes, I was surprised to find I was drenched with sweat. I knew goalies were flexible and focused, but their job looked kind of sedentary, which is why it appealed to me in the first place. It turns out a goalie can lose 10 lbs. during a game. I couldn't believe how exhausting it is just to fall down on your knees and quickly get up again.

In his next game, Potvin had the game of his life, stopping 55 shots out of 57, which tied a team record. After the game, in a moment I now appreciate as a narcissistic epiphany, I pulled him away from a group of reporters to ask him about my goaltending. "Honestly, you were good," he said after much hounding. "You were very good. You made some good saves." Our experience, he suggested, may have contributed to his performance. As he left to get on the bus to the Islanders' game in Toronto, he turned to me and asked, "Can you come with me?" I said no. I've got my own game to work on.



PHILATELY

NATURAL SELECTION

The U.S. Postal Service recently announced that video games and the fall of the Berlin Wall top the list of subjects Americans want on stamps representing the 1980s. Next month people will vote on '90s stamps. We asked ninetiesmings and nine-andunders for their input. Can you guess who chose what?



CARLOS ALONSO FOR TIME

MILAN TOMIC FOR TIME

MILESTONES

CHARGED. GARY DALE HOKE, 25, employee of PairGain Technologies; with securities fraud; in Raleigh, N.C. Hoke is accused of creating a fake Bloomberg news-service report on the Internet that claimed that PairGain would be acquired for twice its price. The notice briefly caused the firm's stock to increase 30%.

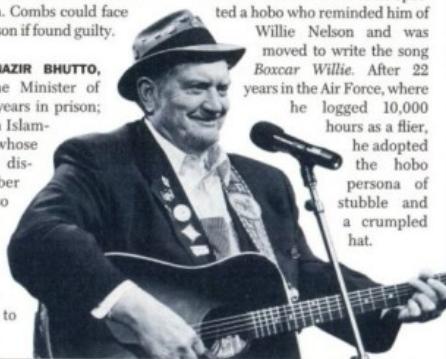
CHARGED. SEAN ("PUFFY") COMBS, 29, rap superstar; with assaulting Interscope record executive Steven Stoute; in New York City. Combs was reportedly upset by the video for the song *Hate Me Now*, by Stoute's client, rap artist Nas. It includes a guest appearance by Combs, who is nailed to a cross. The video was aired on MTV before the alleged assault. Stoute says Combs was one of three men who attacked him. Combs could face seven years in prison if found guilty.

SENTENCED. BENAZIR BHUTTO, 46, former Prime Minister of Pakistan; to five years in prison; for corruption; in Islamabad. Bhutto, whose government was dissolved in November 1996, was also fined \$8.6 million. She is currently in England and is expected to return to Pakistan to fight the charges.

DIED. ANTHONY NEWLEY, 67, showman; of cancer; in Jensen Beach, Fla. He co-wrote, directed and starred in the 1962 hit musical *Stop the World—I Want to Get Off* and helped write the *Goldfinger* theme and the score for *Willy Wonka & the Chocolate Factory*. Newley was married three times, once to actress Joan Collins.

DIED. JEAN VANDER PYL, 79, actress and voice of Fred Flintstone's wife Wilma; of lung cancer; in Dana Point, Calif.

DIED. BOXCAR WILLIE, 67, country singer; of leukemia; in Branson, Mo. Born Cecil Travis Martin, Boxcar was the son of a railroad man and grew up alongside a train track. In the 1960s he spotted a hobo who reminded him of Willie Nelson and was moved to write the song *Boxcar Willie*. After 22 years in the Air Force, where he logged 10,000 hours as a flier, he adopted the hobo persona of stubble and a crumpled hat.



PHOTOGRAPH BY THE ASSOCIATED PRESS

THAT'S ALL, FOLKS

FROM ANOTHER WORLD TO OURS After 35 years on the air, *Another World*, NBC's longest-running soap opera, has been canceled. You may not know anything about Bay City, but a number of important plot developments and future stars premiered there, some more welcome than others:

- It was the first television program to allude to an illegal abortion (1964)
- It was the first soap opera to expand from half an hour to an hour (1975)
- It's where Ray Liotta got his start (1978)
- It was the first soap opera to expand from

an hour to an hour and a half (1979)
■ It's where Morgan Freeman (1) broke out of children's television (1982)
■ It was the first soap opera to feature a dwarf as a regular character (1984)
■ It was the first soap opera to feature a character with AIDS (1987)
■ It's where there have been 18 disrupted weddings since 1977
■ It's where Anne Heche (2) got her start (1987)
■ It's where *Beverly Hills 90210*'s Gabrielle Carteris (3) got her start (1988)



PHOTOGRAPH BY THE ASSOCIATED PRESS



2

PHOTOGRAPH BY THE ASSOCIATED PRESS

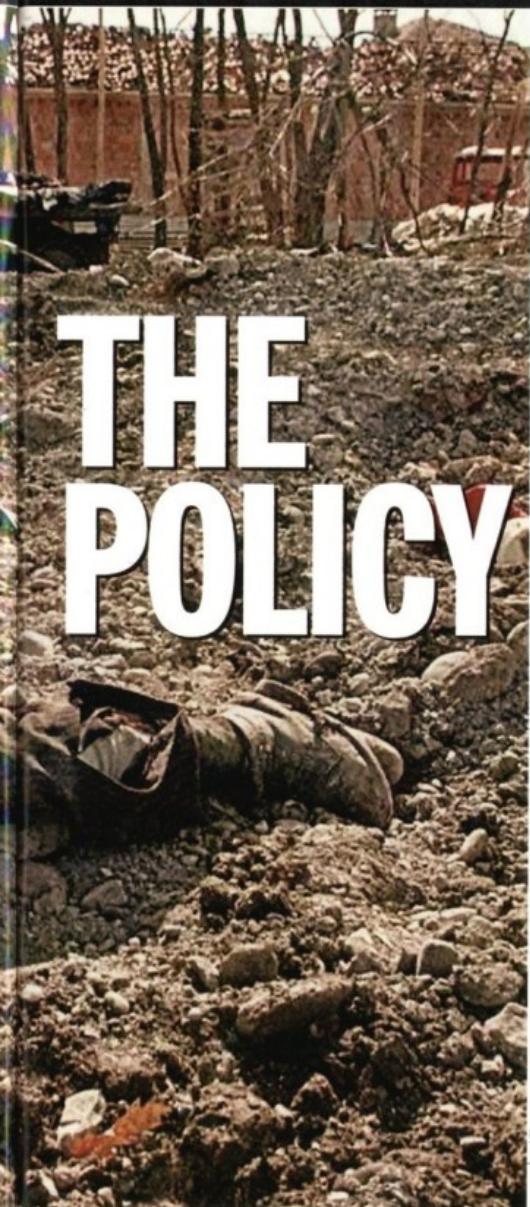
DANA PERINIAN-STUDIO

By David Bjerkie, Tam Gray, Daniel Levy, Lina Lozano, Michele Orecklin, David Spitz, Flora Tartakovsky and Chris Taylor

KOSOVO CRISIS THE DIPLOMACY



WHOSE FAULT?
NATO admits to a
tragic error, but
this picture may
have been staged



THE POLICY

BOMB

A week of gruesome bombing is a haunting overture to NATO's 50th-birthday party

By JOHANNA MC GEEARY

WHAT A TERRIBLE MOMENT FOR NATO TO CELEBRATE itself. Washington is busy gussying up for the red-letter weekend marking the alliance's 50th anniversary, but the bloom is gone. There will be no symbolic flyby while most of NATO's planes are engaged in firing lethal munitions at an enemy that will not cry uncle. There can be no self-congratulation while NATO generals are apologizing for two deadly mishaps that killed scores of Serb and Kosovo Albanian civilians. Even the lavish dinners will be muted by the thought of three-quarters of a million dispossessed Kosovars trapped inside the province at the mercy of Serb terror, hunger and disease. The summit, which begins this weekend, was supposed to define "a new NATO for a new

era." Instead, it has its hands full figuring out how to win a regular old-time war.

Last week didn't help much. Four weeks of bombardment by the West's air armada may have exacted a toll on Slobodan Milosevic's fuel depots and airfields, army barracks and police headquarters. But the laser-guided bombs and cruise missiles have been powerless to halt the carnage inside Kosovo. What was billed as a fast, decisive air campaign to frighten Milosevic into submission has degenerated into a grinding war of attrition, demanding more planes, more troops, fresh plans, new goals.

President Bill Clinton and the other men who lead NATO are now having to improvise. The lack of progress provokes calls from one side to send in the infantry and from the other to press for political accommodation. U.S. lawmakers returned from their Easter recess but couldn't decide where it was politic to come down in the most serious military conflict since the Gulf War, so they punted, putting off all debate and all votes until they see which way the war blows.

The Administration was clutching at straws too. On Thursday the President and various aides suddenly hinted at another war aim: if Milosevic won't capitulate, then NATO will bomb until it destroys enough Serbian forces to level the ground for Kosovo Liberation Army guerrillas to take over the province. "That is one of those fantasies that nonexperts create," scoffs a Western diplomat in Tirana. "[The K.L.A.] has] gotten their asses kicked. So how can any reasonable

427

KOSOVO CRISIS THE DIPLOMACY

man expect the K.L.A. can drive the Serbs out of Kosovo?"

NATO was distracted from diplomatic big-think last week by the more immediate need to allay the impact of its misfires on civilians in the war zone. When two missiles struck Train No. 393 while aiming to blow up a Serbian bridge across the Southern Morava River last Monday, at least 10 Serbs were incinerated and 16 other passengers badly wounded. While Belgrade played relentlessly on the West's heartless intentions, NATO brushed off the mishap as a "regrettable" consequence of Serbian intransigence.

But the alliance fared disastrously two days later when it first denied its planes had savaged a convoy of fleeing Albanians inside Kosovo, then fessed up to the terrible error. Serbia spared no efforts to display this second sample of Western "atrocities," escorting journalists from Belgrade to the grisly scene of corpses and bodies blasted apart. But as NATO struggled to downplay the unfortunate accident of war, there

were suggestions that some of the scenes had been staged by the Serbs.

No matter the truth, such images raise the pressure to look for a peaceful solution. A growing number of NATO's members convening for the summit are restless to open a diplomatic front. But for now, the diplomacy is quite literally all talk. While the 19 NATO nations solidly agree on five basic principles for any peace settlement—a halt to all combat activities and killings in Kosovo; withdrawal of Serbian military, police and paramilitary forces; the deployment of an international security force; the return of all Kosovar refugees; a political return on the basis of the Rambouillet accords—not everyone concurs on the details or the means to get there.

Some tentative initiatives have been put into play. Last week Germany, whose government must keep the pacifist Greens Party inside its ruling coalition, floated what was quickly labeled a peace proposal. But the main inducement to Milosevic, a 24-hour suspension of bombing if he

would begin removing his forces, was a no-go with Washington and London because neither trusted Milosevic to deliver on his end of the deal. Washington had less of a problem with Germany's idea of putting the Kosovo peacekeepers under a U.N. mandate if Russia agreed to be part of the force, but balked at giving the U.N. too strong a hand on the steering wheel. The White House, says a top official, remains adamant that no matter what the force is called or how it's dressed up, "we're not going in unless it's a NATO-led force."

But no one seems to know what could open the door to a smooth NATO entry. This week's summit is likely to delve less into the metaquestions facing NATO—who should have nuclear weapons, for instance—than the immediate problem of how to get safely in, and eventually out, of Kosovo. In an effort to rectify its grave mistake in telegraphing Belgrade that ground troops would never be used, NATO may announce at the summit that "it is starting to plan for ground troops," said a senior U.S.

Edward Barnes/With the K.L.A.

A Desperate Fight For a Key Outpost

SINCE EARLY APRIL, THE KOSOVO LIBERATION Army has been locked in its biggest, most important battle: an attempt by many of its most elite, experienced soldiers to open a corridor into Kosovo through the snow-swept mountains of northern Albania. Last week hundreds of fighters attacked and captured a small, six-hut Serbian border post at Kosare and swept through a nearby Serbian army barracks. The goal, commanders said, was to reach as many as 20,000 refugees stranded near the border and create a bridgehead that would allow the rebel army to set up bases inside Kosovo. But the bloody victory was a reminder that, Western hopes notwithstanding, the K.L.A. is still woefully short of experience.

The road to Kosare rises along a nearly impassable dirt track rutted by farm tractors pulling loads of ammunition up the slopes. From the road it is easy to spot Serb-held towns in the valley below, many marked by rising columns of smoke. Ammunition boxes are stacked in small crevices. Soldiers huddle near fires made



QUICK ESCAPE

After Serbian artillery punctured a K.L.A.-held village near Pec last week, both citizens and rebels dashed into Montenegro. At left, refugees in a wind-chilled pass

from the empty crates. Serbian shells scream continuously, reverberating through the canyons. Soldiers, some in uniform, others in track suits, carry everything from bolt-action carbines to Kalashnikovs. There are two questions: Where is the commander, and where are the Serbs?

Zehir Kryeziu, 29, is a former car painter in Germany who, with two days' training, was thrown into the battle on Wednesday. Lying in a grimy hospital bed in nearby Bajram Curri, still wearing his mud-caked uniform, he says he was carrying supplies to the assault forces when he was hit in the groin with shrapnel. "I had to walk for 24 hours holding my wound

closed," he says. "When I got out of Kosovo I had to stop a local car and persuade the driver to take me to the hospital."

Like many other soldiers, Kryeziu is frustrated by the K.L.A.'s disorganization. "Do we have good officers? If you mean someone who tells you to stand there and fire, then we have good officers," he says sarcastically. "I went into battle with a single-shot rifle and 40 bullets. It wasn't enough." Says Arlind Ismailukaj, an Albanian official: "They barely know how to use their Kalashnikovs. Last week they sent in a patrol of 24 men, and 20 were killed. The Serbs are smart and fight with artillery from a distance."

"A lot of people willing to die, but few who know how to fight." —K.L.A. soldier

diplomat. But the alliance has not actively moved closer to committing foot soldiers to the fray.

Nor does it have means at hand to alleviate the suffering of the hundreds of thousands of Kosovars trapped in half a dozen remote pockets by marauding Serbian forces. Intelligence officials are warning that hunger, disease and exposure could soon start wiping out the displaced ethnic Albanians. Military officers rule out using NATO troops to carve out a land corridor to feed the hungry. Airdrops aren't practical either, since slow transports would have to

fly dangerously low to deliver their cargoes and the Serbs might pick off the supplies.

Washington officials insisted last week that Milosevic is beginning to feel the pain. But they've been insisting that for the past four weeks, and so far Belgrade has sent out no diplomatic feelers, and no one in Serbia shows visible signs of cracking. "Any meaningful diplomacy, besides just wheel spinning, requires Yugoslavia to change its positions and accept NATO's basic principles," says a discouraged senior State Department official. "I can't see anything happening."

All the West's peace settlements require

Milosevic, in effect, to surrender, and that means the allies are going to have to beat him decisively. Even then, NATO is still not sure what it would do next. The ideas the West is mulling—partition, protectorates, autonomy, regional-stability pacts, complex territorial rearranging of the volatile Balkan jigsaw—raise questions as explosive for the region as the current crisis. Nor do they go to the heart of the problem: Milosevic himself. In his constantly evolving dialogue with the American people, Clinton seemed to realize that last week when he said, "The last thing we need in the Balkans is greater Balkanization. The best solution is not endless rejigging of their borders" but a democratic Serbia led by someone other than Milosevic. A good peace plan, no doubt, but if Iraq is any lesson, NATO has no idea how to accomplish it. And in the meantime, Milosevic will have left Kosovo a desolate, smoking ruin.

—Reported by

Douglas Waller and James Carney/Washington, Thomas Sanction/Brussels, Massimo Calabresi/Vienna



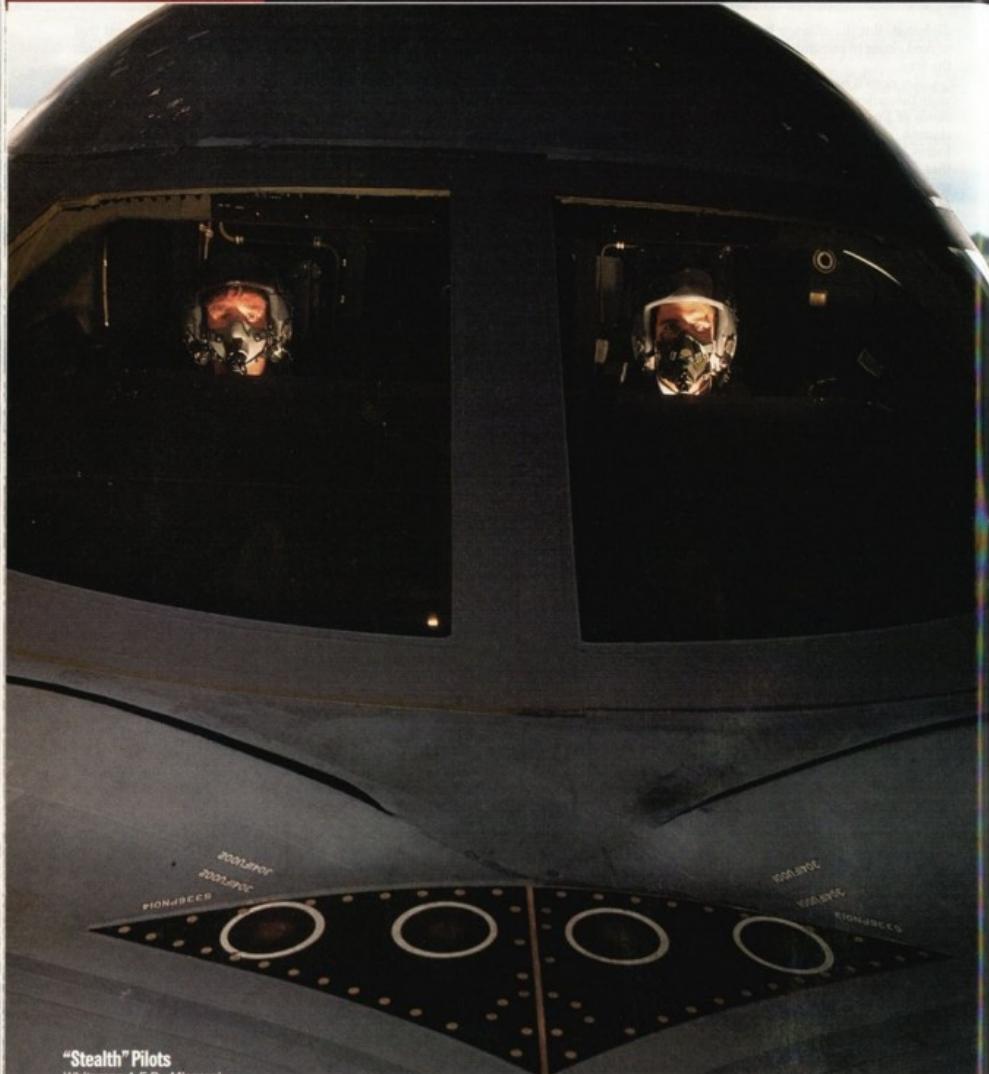
THE BARRAGE
Hit by Serbian
shrapnel, a
rebel arrives
at a K.L.A.
hospital. Some
women are
joining the
K.L.A. At right,
a wounded
civilian
recovers from
a shelling



A few miles away, at the main staging area in Albania, Jackie, 16, and her brother, 14, wait to go back down the mountain. Dressed in army pants, a black jacket and a beret, she looks more like a cheerleader than a soldier. With a quick smile and long brown hair that she constantly flips over her shoulder, she says she was among the refugees who came through Kukes three weeks ago and, against her parents' wishes, joined the K.L.A. She had two weeks of training, and is now fighting at the front. "I fired a lot of rounds today. Of course I killed," she says. But another soldier, reflecting on Jackie, her brother and the thousands of other green recruits arriving to fight, is more cynical. "This is what we have: a lot of people willing to die, but few who know how to fight."

PHOTOGRAPH BY JAMES CARNEY FOR TIME

KOSOVO CRISIS THE MILITARY



"Stealth" Pilots

Whiteman A.F.B., Missouri

Fliers love the costly B-2
bomber. Says a captain:
"My pilots come home
every day. You can't put a
dollar on that."

HOW WE FIGHT

A look inside the Pentagon's battle plan. It's really cool, but is it working?

By MARK THOMPSON WASHINGTON

Once committed to actual combat, anything less than overwhelming and rapid military success for the intervening power will be diplomatically disastrous.

HAT'S HOW YOUNG ARMY CAPTAIN Wesley Clark urged that war be waged in his 1975 thesis on "Military Contingency Operations: The Lessons of Political-Military Coordination." Back then, he was a student at the Army Command and General Staff College at Fort Leavenworth, Kans. Today, the four-star general is NATO's Supreme Allied Commander, based in Belgium. He's running a much different war than the one he advocated a generation ago. It is a war of contrasts, one that pits the firepower of history's most powerful military alliance against a scorched-earth campaign. It is a war of double-checking all targets yet still blowing civilians into cloths of gore and shreds of clothing as they flee their homeland, seeking to escape both Serbian wrath and NATO impotence.

Every hour of every day, warplanes take off from bases across Europe—and some in the U.S.—bound for Balkan targets. The sweep of weapons is impressive. Not since World War II has the U.S. military hurled three types of heavy bombers—B-1s, B-2s and B-52s—at an enemy. The fleet of 430 allied warplanes that began this war will soon grow to more than 1,000 planes. The escalation will force the Pentagon to call up as many as 33,000 reservists.

But if that seems like the kind of overwhelming force Clark had in mind in 1975, still fresh from being wounded in Vietnam and winning a Silver Star for valor, it's not. This campaign is all about controlled

force—controlled by politicians in everything from target selection to level of intensity—and that control is making Clark's job more complicated than he could have ever imagined in 1975.

U.S. policymakers apparently overestimated the coercive effects which the air attacks could generate [in Vietnam] ... Graduated escalation allowed time for the enemy to react to the U.S. pressures and sustain its morale, will and physical support of the war. —FROM CLARK'S THESIS

As the G-force presses you back into your seat at takeoff from the air base at Aviano, Italy, or from an aircraft carrier in the Ionian Sea, you are really never flying solo. You and your wingmen move into a complicated choreography charted for each of the 400 daily sorties. Depending on how far you've

had to fly—B-2s fly more than 15 hours from the U.S.—it's likely your plane will slow down to gulp fuel from an aerial tanker before your final run into hostile airspace. One of every three flights is an aerial tanker sortie—more of them than attack flights.

You'll head in behind a SEAD (suppression of enemy air defense) package. These Navy EA-6B radar-jamming planes and Air Force radar-killing F-16CJs scour the skies for electronic clues betraying a SAM radar. As you plunge deeper over enemy territory between 15,000 and 25,000 ft., there's an aerial ballet taking place far above: a layer of F-15Cs ensuring that no Serbian pilot gets close enough to take a shot.

Above the fighters is the intel package: E-3 AWACS and E-2C radar planes, E-8 Joint STARS ground-surveillance planes and RC-135 Rivet Joint planes. They comb the sky and ground for the enemy, feed

targets to pilots and keep allied warplanes safely apart. When you near your target, you peel off from your buddies, dodging antiaircraft artillery and corkscrewing missiles.

The 493rd Expeditionary Fighter Squadron at Cervia, in northern Italy, has shot down four of the five Serbian MiG-29s killed so far. A lieutenant colonel, call sign "Rico," 40, scored one of those kills from his F-15C. "I was in the right place at the right time, and had a little luck," he says. "He ran into my missile." He had to wait for an AWACS to confirm that it was a lock before taking it on. "That all took about 20, 30 sec., but it seemed like it lasted an hour," he recalls. "Your hands, your eyes, your mouth—everything goes into training mode," he said. "Combat still scares the hell out of me."

NATO remains flummoxed by the limp Serbian air defense. The Pentagon suggests it signifies allied success in taking down the Serbian air-defenses, by attacks, jamming

Sgt. Rick Michalec & Agard Lindsay

Near Skopje, Macedonia
Three men from Michalec's base are POWs. He says his comrades now don't stay out more than four hours



HIT THE GROUND WISELY

NATO planners are worried about the risks of a ground attack. Among the reasons, a lesson from Iraq: it's easier to find and kill an enemy on a desert floor than among steep hills

KOSOVO CRISIS THE MILITARY



CHRISTOPHER MORLEY—BLACK STAR FOR TIME

"Buster"

Aviano, Italy

An F-16 jockey, he took out a Serbian MiG in a ground attack. "It was cool," he says, but adds, "I prefer to get them in the air."

and corrupting data, which the allies have fed into Yugoslav computers through microwave transmissions. Pentagon analyst Franklin Spinney says Serbia's plan echoes its World War II tactics. The Germans sent 700,000 troops into Serbia but were unable to root Serbian partisans out despite four years of fierce fighting. "The Serbs are using their air-defense system as a quasi guerrilla force to capture the attention and distract the focus of NATO air power," Spinney says. "They are not trying to attrit NATO's air force as much as to neutralize its effects."

It's working. NATO pilots rarely fly below 10,000 ft. for fear of being shot down. Proof of the havoc that can wreak could be seen last Wednesday, when a U.S. F-16 apparently fired on what the pilot thought was a military convoy from 15,000 ft.—nearly three miles up. Unfortunately, his laser-guided bomb obliterated a tractor and wagon carrying Albanian Kosovars. Belgrade said 75 people died.

Had the air defenses been crippled, the pilot could have flown closer to that target, seen it was civilian and aborted the strike and the resulting global horror it provoked. A fellow F-16 pilot, from the 555th Fighter Squadron at Aviano, call sign "Buster," was frustrated by the snafu. "The last thing we want to do," the major says, "is help Milosevic do his job." But mixing Serbian troops with Albanian civil-

MASTER THE AIR

Pentagon planners don't dare imagine a campaign without full air superiority.

That means heavy raids against antiaircraft sites—and rich spending plans for next-generation warplanes

shields," he says, "and that makes me sick."

Tactically, the U.S. military is at a disadvantage when an enemy won't fight on its terms. Iraq, with its tanks and warplanes, was probably the last foe to make that mistake. The death of 18 U.S. Army troops in Somalia in 1993 showed the perils of fighting a primitive foe. Even though some 500 Somalis died in the battle, the fight was seen as a defeat for the U.S., which withdrew shortly thereafter. Milosevic was the first test case following the Gulf War in which an enemy could choose, more or less, to try to engage the U.S. and its allies militarily. Knowing he could never win, he has decided simply to stretch out the campaign so much that NATO tires of it.

The longer the bombing continued [in Vietnam], the more diplomatic pressure could be generated against the U.S. to halt it.

—FROM CLARK'S THESIS

Altitude is not the only thing hindering allied efforts: many U.S. surveillance systems require line-of-sight to work, and the craggy, Balkan terrain hides much of what's going on. "At any given time," an Air Force officer says, "a large chunk of the

Serbs is hidden behind mountains." But the hardscrabble Balkans also help: the few roads down below give pilots a sanctuary over the undeveloped forest. Armed Serbs travel along such roads, or only a short distance from them. So U.S. pilots avoid them whenever possible, and cross them at right angles when they must.

The Serbs have been hiding tanks and other weapons in villages, knowing that NATO's aversion to civilian casualties will keep them safe. "We know where they are, but it's difficult when they're parked in villages or in convoys with civilians," says Buster, the F-16 pilot. He held his fire, he recalls, when he spied a white vehicle next to a burning house. "Is it a white van or a military vehicle?" he asks. "No, but I'm sure it's not the guy lighting his own house on fire." And the Serbs have split their armored units so that tanks operate alone

or in pairs, denying NATO nice, fat targets.

This war marks the first time that 90% of all weapons dropped have been so-called smart bombs, guided to their targets either by pilots or satellites. During the Gulf War, only 8% of the bombs dropped were precision-guided. Such weapons really triumphed in September 1995. In a two-week campaign that was 70% smart bombs, the U.S. military helped drive the Bosnian Serbs to the negotiating table.

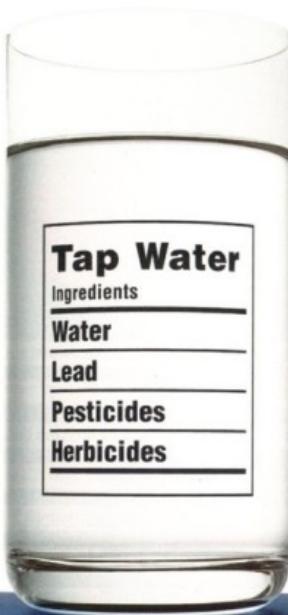
U.S. pilots, who are flying more than 80% of the missions, are usually dropping laser-guided bombs. They trace a pilot-aimed laser beam, adjusting their tail fins to stay on course. But when the laser beam is broken by clouds or fog, or weather hinders the pilot's vision, the \$50,000 bomb goes astray. Weather has been a key Milosevic ally, with good weather only on seven of the first 21 days of the war.

For the first time, U.S. warplanes can drop bombs regardless of the weather, guided to their targets by a constellation of Global Positioning Satellites rather than pilot eyeballs. JDAMs (Joint Direct Attack Munitions) have debuted from B-2 bomb bays. "You use expensive munitions like cruise missiles to defeat air defenses," says retired General Merrill McPeak, the former Air Force Chief of Staff, "and then you fly over with cheap JDAMs that cost, per pound, about the same as hamburger." (That's very prime ground beef, at about \$10 per lb., but a bargain for a near-precision weapon that can be dropped in any kind of weather.)

The air war, though, is draining U.S.



H₂O



H₂uh-oh

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KOSOVO CRISIS THE MILITARY

Julie Grace/Whiteman A.F.B.

A Winning Debut For the B-2

SINCE OPERATION ALLIED FORCE began a month ago, B-2 bombers from this Air Force base in Knob Noster, Mo., have been making a pressure-packed debut. Adding to the stress of combat has been the close eye of B-2 skeptics. But speaking to TIME last week in their first interviews, pilots say the machine has been a dream to fly. The men described taking off over the soybean fields on 30-hr. flights, often made by

pairs of planes, with two men aboard each. One sometimes naps while the other monitors the plane's computer systems, which do 95% of the flying. When the B-2 disgorges one of its bombs, pilots say the plane bumps like a car hitting a pothole. Far below, they can see the flash of their bombs. On board the plane, a hot plate lets them heat up hot dogs or chili—preferred over military rations. Reading helps kill boredom, and there's room for a sleeping bag for short "power naps" and a 50-gal. portable toilet.

The B-2 has had its share of criticism, not just for its \$2 billion cost but also for its purported inability to handle bad weather (an earlier version of the plane had a coating that ran when exposed to rain). But there's nothing like a war to make advocates feel vindicated. Says Brigadier General Leroy Barnidge Jr., who runs Whiteman: "Even an airman with no stripes on his sleeves will say, 'We showed them.' Our guys landed in a driving rainstorm. We're the key ingredient in the bad weather over there." Pilots are delighted with their mount. Says one: "We don't worry about threats [such as plane-killing missiles], because the plane keeps you safe." In a low-touch touch, however, the Air Forces phones all the pilots' wives the minute the planes finish over their targets, letting them know their husbands are en route back to their heartland homes. ■



precision-guided munitions. The Air Force is down to about 90 of its \$1.5 million air-launched cruise missiles and is months away from replenishing that stockpile. The B-2 force had less than 1,000 JDAMs before the war began, forcing the Air Force to order up more a week into the conflict. The war highlights the Pentagon's peculiar priorities: it is spending some \$350 billion on three new high-tech warplane programs but doesn't have the ammo it needs for its current crop of bombers.

Key military questions revolve around Milosevic's ability to survive without what NATO is now destroying. The Pentagon's plans to drain Yugoslavia of oil, for example, only make sense if Serbian forces need fuel to prevail and don't have much stockpiled. "We have destroyed all their big reserves and refineries, but they have a whole network of smaller storage reserves," a French official says. "We thought they'd only have petrol for a month, but now it turns out

they have a capacity far greater than that." And the pulverizing attacks against Serbia's command-and-control network may not be as successful as Pentagon targeteers think. After the Gulf War, the Air Force found out that Iraq's command network "had not collapsed," despite 500 strikes, and that "the system turned out to be more redundant and more able to reconstitute itself" than the Pentagon thought.

Contingency forces which are heavily armored and highly mobile through strategic airlift will be a necessity in contingencies entailing mid-intensity combat.

—FROM CLARK'S THESIS

Of all Clark's ideas, this is the most seductive. A small, powerful force that can be quickly moved anywhere around the globe seems a perfect match for problem spots like Kosovo. The Army has been trying to pull it off for two decades, reaching back to the Soviet invasion of Afghanistan, which made Washington planners nervous about conflicts in that part of the world. But the idea died amid Army politics and lean budgets.

Some in the Army argue that building a smaller armored force is foolish until key advances have been made, especially in the areas of fuel and ammo, which armored forces devour. Electromagnetic guns, lasers, and new fuel types could allow the Army to achieve its goal of fielding such a force that could fight for two weeks without resupply. But until then, the speed of deployment is mostly dependent on how quickly the Army can set up logistics links.

Napoleon's old dictum that an army travels on its stomach remains true today.

The Army's current fast-deploying force is the 82nd Airborne's ready brigade, which is set to move within 37 hours. But the Army couldn't deploy such a unit to Kosovo for action. In recent years, the Army scrapped the aging but light Sheridan tank it once used, and canceled the air-droppable Advanced Gun System that was to have replaced it. That means the 82nd has to seize and hold a major airfield within four hours of parachuting in, to allow C-17s carrying M-1 tanks to land. The Army's latest study on the subject isn't much use either. It's titled, "Enabling Rapid and Decisive Strategic Maneuver for the Army After 2010."

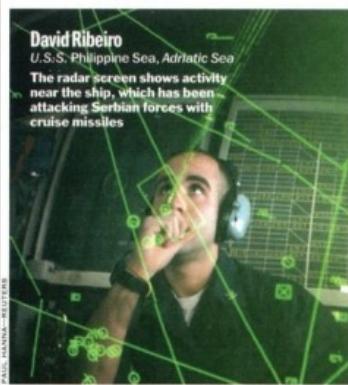
So what would the 30-year-old Wes Clark think of the war his 54-year-old twin is conducting? Hard to say. In public, the general says he's been pleased with events so far, confident that NATO is "degrading" Milosevic's war-fighting ability. But the campaign has violated many of his basic rules—dogma certified not just in his thesis but in most post-Vietnam strategic thinking. And as the campaign plays out, demanding more and more of NATO's men and munitions, the general may reflect on some other words from that 1975 thesis: "Reliance on air and naval forces is unlikely to prove wholly satisfactory."

—With reporting by Greg Burke/Aviano, James L. Graff/Tirana and Thomas Sancton/Brussels

David Ribeiro

U.S. S. Philippine Sea, Adriatic Sea

The radar screen shows activity near the ship, which has been attacking Serbian forces with cruise missiles



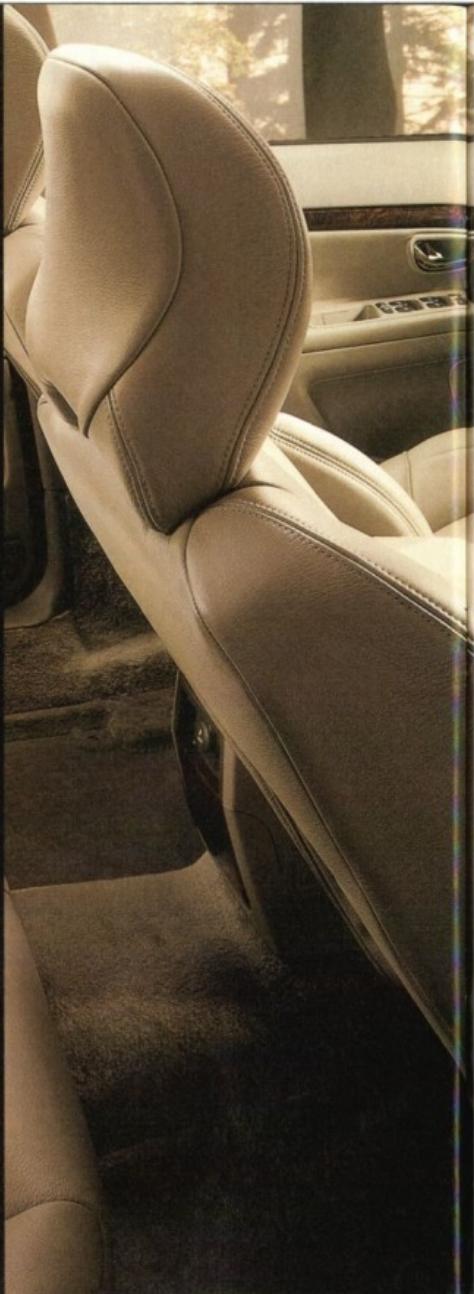
OWN THE OCEANS

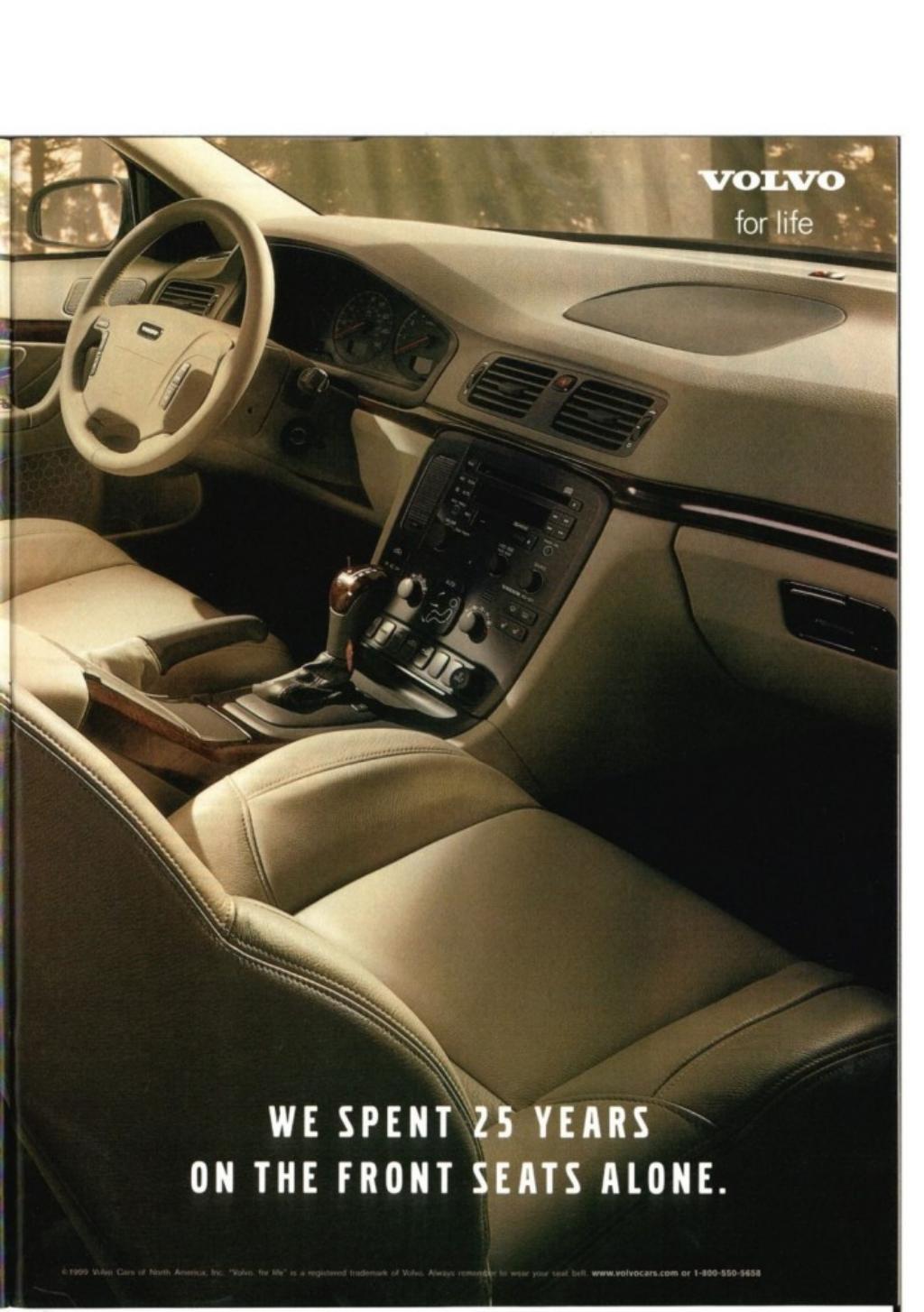
U.S. missile ships and aircraft carriers cruise the Mediterranean unchallenged, pounding Serbian sites. If the war heats up, sea power would also speed troop deployment

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A FIRST REPORT CARD ON VOUCHERS

Cleveland's program gets mixed grades. Parents are happier, but students may not be learning more. And vouchers may be dividing the city

By ADAM COHEN CLEVELAND

ARE YOU AFRAID OF THE JUDGMENT Day?" Sister Mira Anne Nattoli, clad in traditional Muslim robes, asks her fifth- and sixth-grade English class. Today's text is "The Twins and the Missing Math Paper," but the lesson is as much religion as English. "Whoever cheats," a young man reads carefully, "is not a good student of Islam." The students, about 95% African American, wear loose-fitting shirts and headaddresses—skullcaps called *kufis* for the boys and scarves called *khimars* for the girls. Cleveland's Islamic School of Oasis is in many ways a typical Muslim day school, but with a twist. Tuition for more than half its students is paid by Cleveland, Ohio, taxpayers.

The Islamic school is part of Cleveland's pioneering school-voucher program. More than 3,700 of the city's students, nearly 5% of the public school enrollment, now use vouchers to escape the public school system. In a controversial move, Ohio chose to include religious schools in the program. Today the vast majority of vouchers are used at more than 50 religious schools—Roman Catholic, Lutheran, Baptist, Islamic and Seventh-Day Adventist. (The U.S. Supreme Court has not yet decided if tax-funded vouchers for religious schools violate the First Amendment's separation of church and state.) The remaining vouchers are used at a handful of secular private schools, in-

cluding two Hope academies, founded specifically for voucher children.

Vouchers may be the next big thing in American education. Thousands of students in Cleveland and Milwaukee, Wis., are using tax dollars to attend private schools, and Florida is poised to adopt the nation's first statewide program. Texas, New Mexico and Pennsylvania may follow. In New York City, Mayor Rudolph Giuliani is thinking of introducing vouchers, though his schools' chancellor has threatened to resign if the mayor does. Privately funded voucher programs have sprung up

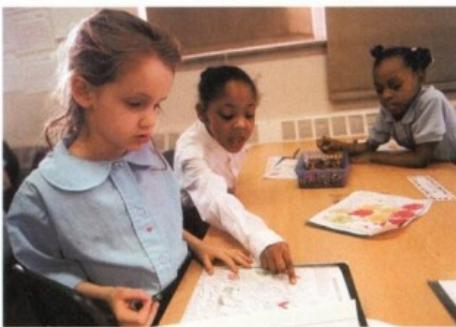


PHOTO BY RICHARD CHALMERS FOR TIME

Hope Central Academy

■ STUDENTS REVIEW a reading lesson at one of Cleveland's two Hope academies, founded expressly to serve voucher children. Many parents give the schools high marks, but they have lagged behind the city's public schools on standardized exams.

in an additional 39 cities, and this week the largest such program in the U.S., founded by Wal-Mart scion John Walton and financier Ted Forstmann, is scheduled to award scholarships of as much as \$1,600 each to 40,000 low-income students across the U.S., a number equivalent to the roll call in a city the size of Rochester, N.Y.

Vouchers' supporters see them as a revolutionary instrument—capable, in the short run, of rescuing poor kids from bad public schools and, in the long term, of forcing that education system to compete in a free market. But critics say vouchers will destroy the public schools by turning them into repositories for America's unwilling, or unwanted, schoolchildren. And they say that voucher programs, especially ones that include religious schools, will Balkanize America by abandoning its common core of teachings and traditions.

For years the voucher debate has been conducted in what-ifs and let's-assumes. But with Cleveland's program wrapping up its third year, hard results and conclusions are coming in—from parents, academics and standardized tests. There has been one clear upside to vouchers: a Harvard study found that two-thirds of Cleveland's voucher parents were "very satisfied" with the academic quality of their children's private schools, compared with only 30% of parents who stuck with public schools. What's not clear is whether they're right to be so happy.

A team of researchers from Indiana University that evaluated the program for the state of Ohio last fall found that vouchers were a mixed bag. Students attended classes that were, on average, smaller by three students. On the other hand, public schools had teachers with



better credentials. They were more likely to have done postcollege work and had an average of five more years of teaching experience. In the end, the researchers concluded, class size and teacher qualifications canceled each other out.

The test scores were perhaps even more surprising. Voucher proponents have long argued that if students were allowed to leave failing public schools—for better-run and more disciplined private and parochial schools—their performance would improve dramatically. But the Indiana study found only minor differences between voucher students and public school students on a standardized fourth-grade academic-achievement test. Voucher students scored better than public school students in language and science, but the differences were, the study found, "relatively small." In the other areas tested—reading, math, social studies and "total battery"—voucher students did no better than their public school counterparts. In fact, the only students who really stood out—for their weak performance—were those in the city's two Hope academies. The test scores of these students, who are the poster children for vouchers in Cleveland, were not just lower, according to the study, but "significantly and substantially

Islamic School of Peace

SISTER DEBBIE JAMES teaches a first-grade class at one of several Muslim schools taking part in Cleveland's voucher system. Prayer is mandatory; Islam is incorporated into the curriculum. Tuition for more than half its students is paid by taxpayers.

lower" than those of public school students and of voucher students in other private schools.

Voucher supporters fault the study's methodology, attacking everything from the impartiality of the researchers to the conditions under which the fourth-graders were tested. Lydia Harris, a reading specialist at Hope Central Academy, says the examiners who came to the school "didn't have a clue," and administered the test during children's nap time. She also suspects the State Department of Education, which commissioned the study, may have wanted vouchers to come off badly because its bureaucratic inertia makes it resist systemic reforms like vouchers. Even the study's authors concede their results don't necessarily discredit vouchers. They note that the small edge displayed by voucher students in two of the six test areas could grow over time to a more significant ad-

vantage. And they say the Hope academies' weak showing could have many explanations, including growing pains associated with starting a new school.

Still, public school backers seized on the hard numbers in the Indiana study as proof that vouchers can't deliver on their lofty claims. "These results are absolutely astounding," says Richard DeColibus, president of the Cleveland teachers' union. "But no one takes any notice of it because it goes against their preconceived notions that private schools teach better." The fact that the Indiana study didn't give second thoughts to voucher supporters is proof, he says, that their foremost concern is not children, but promoting a conservative education agenda. "Why would they want to expand a system that is demonstrably a failure?" DeColibus asks. "Because it's about ideology."

However, the most troubling aspect of the Cleveland voucher experiment has nothing to do with test scores and everything to do with the danger that vouchers could undermine the role that public schools have played in American life. Public schools have long held the promise of being America's great equalizer, mixing students of different races, classes and religions in a single student body. At their best, public schools have united diverse groups

of students, many of them immigrants, by passing on the nation's shared civic heritage, from George Washington to George Washington Carver. Public schools have the ability to teach democracy simply by being open to all children, and regarding them—and their backgrounds and religions—as equally worthy. "Nobody claims private schools can't teach tolerance, mutual respect and nondiscrimination," says Princeton political science professor Amy Gutmann. "But in public schools, they are taught as much by the mixing of students as they are by the curriculum."

But Cleveland's voucher program threatens to replace the single-heritage credo of public schools with a system that teaches one faith in one school and a competing faith in another. That's because the hard truth of the city's voucher program is that the choice it offers parents is mainly a choice of religious schools. The problem is that Cleveland's vouchers are capped at \$2,250—not unusual for a voucher, but far too little money to allow real choice in the private school market. A poor parent who wanted to use a voucher at the Hathaway Brown school in suburban Shaker Heights would be out of luck: tuition there costs more than \$13,000 in the higher grades. The \$2,250 vouchers work for religious schools because they receive charitable contributions from their churches, conduct fund raisers and keep salaries excruciatingly low. Starting pay for a Catholic school teacher in the Cleveland metro area is \$16,000, vs. \$26,490 in public schools.

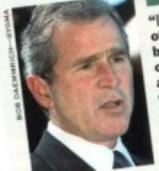
Nor can parents use vouchers in suburban public schools. Ohio's voucher law was written to allow vouchers to be used in the suburban schools, but only in those that agreed to take them. Bert Holt, director of Cleveland's voucher program, had high hopes when she made the rounds of suburban school districts to persuade them to sign up. But not one suburb agreed to accept students from the city's heavily poor and minority student population. Result: 80% of Cleveland's vouchers are being used in religious schools.

Metro Catholic Parish school teaches many aspects of the nation's shared civic culture. But what it cannot convey is the American notion that all faiths and creeds are entitled to equal respect. The

Hot Topic, No Consensus

VOUCHERS ARE LIKELY TO BE A hot topic in next year's presidential race, and both parties are torn. Democrats are being pulled by two key constituencies: racial minorities, who disproportionately back vouchers, and teacher unions, which oppose them as a threat to public education—and to their jobs. Meanwhile, the G.O.P.'s big tent holds both conservative voucher backers and moderates worried about their effect on public schools. Here's what three likely candidates are saying:

GEORGE W. BUSH
"Parents from all walks of life are hungry for a better education for their children ... I know there's a huge debate raging, but we must not trap students in low-performing schools. It is time to see if it works: Let's try a pilot voucher program."



ELIZABETH DOLE
"The No. 1 priority of any education reform must be ... to restore our public schools to greatness. But where schools are unsafe and a child is trapped in a failing school, the state should provide ... [a voucher] to help pay for education elsewhere."



AL GORE
"Diverting tax dollars from public schools to support tuition for some children at private schools would drain the funds we need [for] an ambitious program of ... reform that would allow us to have world-class schools in the 21st century."



teachings of Christ infuse the academic environment. Hallways are lined with posters asking, WHAT WOULD JESUS DO? A morning announcement over the p.a. system reminds students of the importance of Lent, and tells them to pray to "the Father, the Son and the Holy Spirit." And all students, Roman Catholic or not, must participate in Catholic prayer. "We're very up front about the fact that we have a formal religion class every day," says Sister Anne Maline, Metro Catholic's principal. "We pray every day, over the p.a. system and in church, and we ask the parents to sign a contract allowing it."

The Islamic School of Oasis, across town, also requires prayer: Zuhra, a short service, four days a week, and the longer Jumah service on Fridays. The posters here have an Islamic theme, like the MUSLIM CHILD'S ALPHABET, in which each letter has a Muslim reference: A is for Allah and Q is for Qu'ran. "We started as a religious school because the rights of Muslims were not being protected in the public schools," says principal Da'ud Abdul Malik. Before vouchers, about three-fourths of the student body was Muslim. Now, a majority is non-Muslim. But as at Metro Catholic, the religious requirements apply to all.

In a recent TIME/CNN poll, respondents opposed public vouchers for private and religious schools 54% to 34%. Cleveland's experience helps explain why people are wary, but also why vouchers have such a strong appeal. Most voucher parents aren't pro-voucher or anti-public school: they have a pragmatic desire for safe, effective schools. In some cases, vouchers have made all the difference. Cleveland parent Monique Malone used a voucher to send her son John to the Marotta Montessori school and watched him thrive in a classroom of children purposefully working with blocks, maps and other didactic tools.

"The education has been phenomenal," she says. And many voucher parents say the biggest change in their children's new schools has been their sense of order. Melissa Defesus once worked in a nonviolence program in the Cleveland public schools and saw how rowdy they can be. She now sends her daughter to a parochial school. "They're real strict," she says. "In a Catholic school, there's not a lot of ruckus."

And that may be the biggest lesson from Cleveland. If public schools want to maintain their position, they need to convince parents that they can do the job. "The real choice isn't between vouchers and the status quo," says Gutmann. "It's between vouchers and improving the public schools." —With reporting by Ken Myers/
Cleveland

Margaret Carlson

Ted's Excellent Intentions

A mogul gives out scholarships to fix the system. But it's not that simple

WHEN GOOD THINGS ARE DONE BY RICH PEOPLE, WE tend to wonder why. Dallas Cowboys tycoon Jerry Jones, who says he has people highlight passages in books for him so that he doesn't have to read any, gave \$1 million to the Library of Congress last Wednesday. Financier George Soros spent some \$2 million last year toward making marijuana legal for medical use. Now comes leveraged-buyout mogul Ted Forstmann, who together with Wal-Mart heir John Walton is spending \$100 million to give 40,000 scholarships to disadvantaged children who want an alternative to public school. This week the Children's Scholarship Fund will announce that it has been besieged with applications for the \$600 to \$1,600 annual stipends, even though strapped parents will have to come up with an average of \$1,000 themselves. And that's not the only success Forstmann has scored on this front. Last year's smaller program, for 1,000 students in Washington, produced enough heartwarming success stories of kids now thriving to fill a season of *Touched by an Angel*.

So what's wrong with this picture? Nothing, as far as it goes. Sending hundreds of disadvantaged kids to superior schools is better than building another mansion in Aspen. And throwing money at a problem, contrary to popular wisdom, generally does help solve it. As Forstmann strides into the room like the Master of the Universe he is (he has made a fortune buying up Gulfstream Aerospace, Dr Pepper and General Instrument, among others), I'm prepared to give the attention due a dealmaker bringing his can-do attitude to social problems. Remember the appeal of Ross Perot's tinkering under the hood of government? "You get mediocrity in a monopoly when the worst teacher is treated like the best," says Forstmann. "Introducing competition will shock the education establishment and make parents more responsible. It will weed out the bad schools in favor of the good ones."

Forstmann is investing in education because it's where he believes he can get the most "leverage" for his investment. For example, he points out that his top \$1,600 stipend goes a long way toward the average Catholic school tuition, which is roughly \$2,000 to \$5,000 annually. I agree with Forstmann on the magic of Sister Mary William and company. If I'd gone to my neighborhood school instead of the

parish school, it's doubtful I would have gone to college on scholarship or have the life I now do, the result of diagramming hundreds of sentences and writing countless essays under boot-camp conditions. But there's a difference: no one thought non-Catholic taxpayers should subsidize that choice or that money should be taken away from the public schools.

Which is what these scholarships, once they stop coming out of Forstmann's pocket, will ultimately do. For then they will be vouchers, which set off alarms because they involve tinkering with what Jefferson envisioned as the "gratis" common school, the one institution that could make good on the Constitution's promise of equality. According to a 1997 Gallup poll, most Americans are happy with public schools. Few parents in Greenwich, Conn., would take their child out of its fine public schools for a voucher of \$1,600. But in inner-city Hartford, many parents would sensibly embrace them, which would leave the public schools there in even worse shape. And where will those parents clutching vouchers go? Not to the suburbs, where many may resent vouchers as busing by other means. Poor parents could be fighting to get into too few existing schools and end up in cobbled-together, strip-mall operations of dubious quality. But Forstmann says, "Public schools will get better as they are forced to compete. Keep politics out of the equation, and resistance to alternatives will melt away."

That's like saying take other passengers off commercial airliners, and we'll all be flying around in roomy comfort like Forstmann on his Gulfstream. Politics is at the heart of the debate over who gets what and who pays for it—whether a free nonsectarian school is one of the gifts of being born in America.

Unlike the ferociously certain Forstmann, I end up in the mushy middle. I don't want to keep any kid from getting out of a bad school now, but I am worried that we won't be able to put Humpty Dumpty back together again if we try the wrong experiment. Forstmann, who has a history of good works, is doing good here by playing out the idea that the poor shouldn't be a captive audience for bad schools. Forstmann has demonstrated the demand side. Perhaps, as a Master of the Universe, he'll move on to the supply side next and save us all from storefront McSchools, which are sure to follow the money. Or better yet, he could just keep the scholarships flowing. That's the best way to keep politics out of it. ■



REUTERS/CHRISTIANE DE LAROCHE



MARK LIDDELL/AP

Forstmann admires the quality of Catholic schools, like this one in Cleveland



Starr's Last Gasps

After losing to McDougal, the prosecutor is chasing side player Julie Steele. Does this make sense?

By VIVECA NOVAK WASHINGTON

IN THE EYES OF EVEN HIS MOST SEVERE critics, Ken Starr finally got one right. At a Senate hearing last week, the independent counsel whom the White House accused of being politically motivated made the argument that the statute that created him should die. His reasoning: you just can't take politics out of the process.

If Starr's surprising testimony on Capitol Hill doesn't kill the law by itself, the verdict two days earlier in Susan McDougal's trial should help. Acquitted of an obstruction-of-justice charge, and with the jury deadlocked on two criminal-contempt counts, McDougal claimed victory after a five-week trial that became a debate over Starr's tactics and motives. According to jurors, Starr was unable to persuade even a majority of the panel that McDougal had refused to cooperate with his Whitewater grand jury. Better news for Starr came later that day in Little Rock, Ark., when federal judge Susan Webber Wright ruled that Clinton had shown contempt toward her court when he lied in a deposition about his affair with Monica Lewinsky. But for a President who told Dan Rather he doesn't consider the impeachment vote a "badge of shame," the legal slap may amount to a footnote in the saga.

Starr's methods, however, will be debated again next month in the trial of Julie Hatt Steele of Virginia, whom he has accused of obstructing justice and making false statements. At one level, it shapes up as a petty

personal contest between Steele and Kathleen Willey, the woman who said Clinton groped her in November 1993. Steele, who was Willey's friend, contradicts Willey's claim that she told Steele about the incident.

Starr's pursuit of Steele is a puzzle. Some legal observers have wondered why Starr is so willing to go to the mat for Willey that he has made Steele's indictment the only one from the Lewinsky phase of his investigation that he is pursuing, even though she has never been more than a peripheral potential witness undercutting the claims of another peripheral witness in a civil case that is now history.

And Willey has a pile of credibility issues. For one, plenty of evidence contradicts her 60 Minutes' description of Clinton's allegedly upsetting grope. Linda Tripp, of all people, told Starr's FBI agents last June that Willey was flirting with the President for months before the supposed incident. Tripp claimed that Willey, a White House volunteer, would call Tripp at home at night to find out Clinton's schedule so she could position herself nearby. Willey

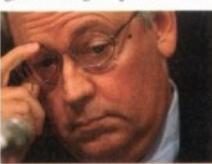
SOLIDARITY: McDougal and Steele accused Starr's prosecutors of pressuring them to lie

tried to work evening events at the White House and wore a particular cleavage-highlighting black dress.

After Clinton allegedly made his move, Willey described Clinton as a great kisser and speculated about becoming his girlfriend, according to Tripp's FBI interview. The same night she called another friend, Carolyn Cardozo, who told Starr's grand jury that Willey said she was going to be the Judith Exner of the Clinton White House, a reference to John Kennedy's mistress.

The problem is that Steele's credibility will become an issue too. She told a *Newsweek* reporter chasing the Willey story in 1997 that a distressed Willey had come to her house on the night of the alleged White House incident to tell her about it. But she called the reporter before the story was published to say she had lied to him at Willey's request. Prosecutors in Starr's office asked Steele to support Willey's story in any way she could. She didn't have to say that the alleged approach was unwanted, or even when it happened, just that Willey told her something about a sexual encounter with the President. "I couldn't do that," Steele told the McDougal jury. "I left the meeting in tears. I didn't know anything to tell them." Prosecutor David Barger has told Steele that three former friends of hers will testify that she told them about Willey and the President. But Barger's biggest hurdle is identifying a motive that would explain why Steele has stuck so hard to her second story.

When the trial opens May 3, the cast of possible witnesses will recall the Year of Monica: Willey is likely to be Starr's star witness; Tripp may be called to undercut Willey; and Steele's lawyer Nancy Luque wants to compel an appearance by *Newsweek* reporter Michael Isikoff. In the meantime, the former \$60,000-a-year communications consultant is hundreds of thousands of dollars in debt and fears losing her house in a few months. Starr, for his part, went on Larry King's show last week and complained that the worst thing about his job is that "the independent counsel is all alone." That feeling is probably one thing he has in common with his lone defendant from the Lewinsky scandal. ■



Starr's Mixed Record

■ **Jim Guy Tucker and the McDougal's:** Charged with fraud and conspiracy; all were convicted on some charges.

■ **Herby Branscum and Robert Hill:** Arkansas bankers accused of misuse of bank funds; acquitted of some charges, mistrial on others.

■ **Susan McDougal:** Charged with criminal contempt and obstruction of justice; acquitted on one count, mistrial on remaining two.

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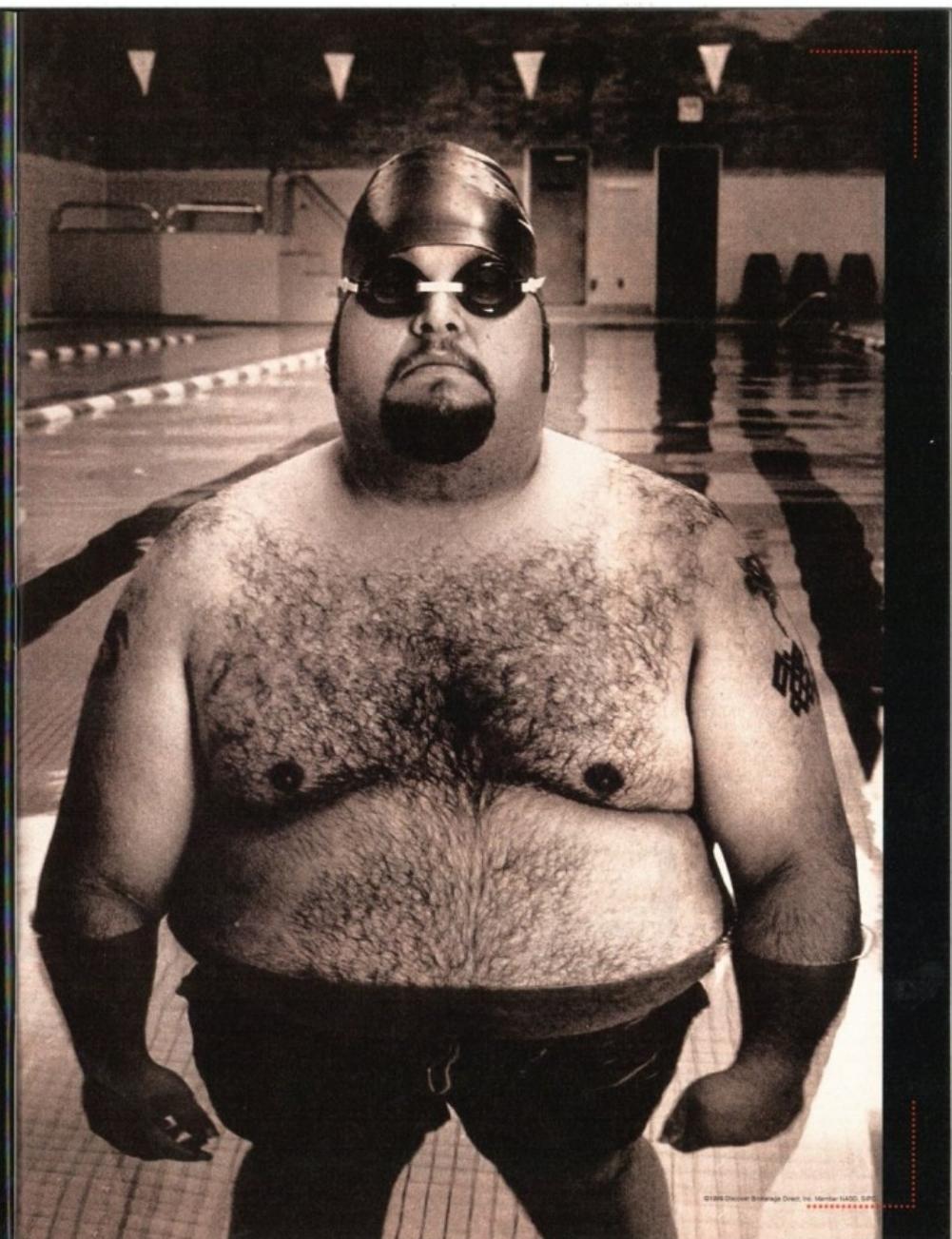


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PEPSI GETS BACK

By FRANK GIBNEY JR. PURCHASE

COCA-COLA OFFICIALS HAVE OFTEN been asked about their 100-year rivalry with Pepsi-Cola, and they usually respond diplomatically, claiming to benefit from having a competitor that has seemingly fought them to a standstill for every drop of business worldwide. "If Pepsi didn't exist, we'd have to invent it," is the generous reply.

And now we know why. Over the past five years the Atlanta goliath has used Pepsi as a punching bag, kicking its can from Turkistan to Tallahassee and creating vast amounts of wealth for shareholders in the process. Who wouldn't want a foe like that? By the time Roger Enrico walked into the chief executive's suite at PepsiCo headquarters in Purchase, N.Y., three years ago, the company's performance had detached itself from its image as a vaunted marketing maverick that launched the cola wars in the '80s. The numbers tell all: in the U.S., Pepsi sells a single soda for every three Cokes. The troops were as confused and demoralized as Enrico had seen in his 27 years with the company—"shell-shocked," says Phil Marineau, who arrived in 1997 as president of Pepsi-Cola.

So Enrico the old cola warrior is rewriting the rules of engagement. When you see Pepsi advertising on the air, it will still be in Coke's face, although perhaps not as relentlessly as before. Take its "Joy of Cola" campaign, in which the cherubic Hallie Eisenberg lip-synchs voice-overs from celebrities—including Marlon Brando as Don Corleone—to demand Pepsi over you-know-what. Yet it's a much broader, less edgy approach than the company's Generation Next theme, whose message excluded much of the audience. The company has also launched a new beverage, Pepsi One, to keep hammering away at Diet Coke.

But in many respects Pepsi is getting real about what it can accomplish. On the ground, the goal is to be in your face, not Coke's, and steadily increase Pepsi's presence by gaining a restaurant account here, an extra foot of shelf space there. For Pep-



COMBO:
CEO Enrico
plans a
coordinated
attack to
flatten Coke

FRITO-LAY

64% Company
Sales

WHAT'S NEW
Salty snack giant
launched Wow
fat-free chips;
acquired Cracker
Jack

GROWTH 5%
annual volume in
U.S.; 14% int'l
BRANDS Lay's,
Fritos, Ruffles,
Doritos, Tostitos

N E S S

KIN IN THE GAME

The company is on the rebound with a new vision, and an old problem: Coke

si, a company whose culture has always thrived on big-idea, renegade thinking, this is much humbler stuff. But, asks Marneau, "how do you become a Pepsi loyalist if you can't get it?"

To execute this plan, Enrico has recently completed a sweeping reorganization. In the past two years, he has pulled PepsiCo out of the restaurant business, jettisoning fast-food chains, including Pizza Hut, Taco Bell and Kentucky Fried Chicken, which had combined sales of \$11 billion. The profits were tasty, but the capital required to build restaurants was giving Pepsi heartburn. Last month the company spun off its main \$7 billion bottling operation into an independent public company, something Coke did years ago to create Coca-Cola Enterprises. The

soda business actually has two components, the first of which, making and marketing cola concentrate, is very profitable. Mixing that concentrate with carbonated water, putting it in bottles and getting it to you is another capital-intensive business that Pepsi decided to do without.

The spin-off will leave Pepsi's concentrate and bottling setup looking a lot more like Coke's. "It's a better mousetrap," Enrico concedes with a grin. "And there's no pride in this, so why not do it ourselves?" To add to his new mix, Enrico last August spent \$3.3 billion on America's leading premium juicemaker, Tropicana. Last year PepsiCo had total sales of \$22.3 billion.

Enrico's revolution has already put Pepsi in a position where it can hurt Coke. For the first time in years, the Big Red growth machine is double-clutching, feeling the dark side of globalization in places like Brazil, its third largest market, where the recent devaluation hurt business severely. Coke's sales are also weak across Asia, and the company's huge investment in Russia is underwater. Pepsi needs to make a dent in Coke away from home, because the Atlantans derive most of

their profits outside the U.S., where Coke outsells Pepsi 5 to 1.

At home, Pepsi's restructuring—and the cash thrown off by the IPO—allows it to take dead aim at Coke's near monopoly in fountain soda sales. It's a hugely important part of the business. Pepsi holds its own in grocery and discount stores, but the fountain business gushes profits for Coke. Now, free of the restaurant business ("Why buy from one of your competitors?" Coke sales reps used to be able to say to fast-food operators), Pepsi can become more effective. Even if the campaign doesn't win many big accounts—it did win Bojangles and Pizza Inn recently—it could force Coke's costs up 30% to 40% this year, according to analysts. Last week, for instance, Coke retained its business with Burger King, but the victory might yield lower profits because of the added concessions Coke had to make. Pepsi is also throwing money at vending operations, after ignoring the sector for years. The company says it has increased the number of machines 240% since 1997.

Enrico is also enlisting a powerful ally in this campaign—Frito-Lay, the Dallas-based subsidiary that is to snacks what Coke is to sodas. Frito accounts for two-thirds of Pepsi's sales and profits, and it is one of the most efficient companies in the world at getting products to retail via its truck routes. In the past, Pepsi did little to leverage Frito's commanding position as America's premier snack company. Now it intends to use Frito's muscle as a wedge for all PepsiCo products.

In the aisles, the new PepsiCo is trying to combine sodas and snacks in lavish displays at supermarkets and convenience stores. In tar-

PEPSI-COLA

33% Company Sales

WHAT'S NEW
Launched Pepsi One diet drink, spun off bottling group

GROWTH 6%
volume annually worldwide

BRANDS
Pepsi, Mountain Dew, Lipton, Slice

TROPICANA

3% Company Sales

WHAT'S NEW
Bought orange juice king to boost clout with retailers. In O.J., Coke is No. 2

GROWTH 7%
annually worldwide

BRANDS
Tropicana Pure Premium, Dole

GONE...

FAST-FOOD joints like KFC, Taco Bell and Pizza Hut ate too much money. Freed-up cash can be applied to marketing of Pepsi brands



getting consumers, what Pepsi calls the "Power of One" makes perfect sense: it's all about making sure that everybody who buys a salty bag of Tostitos or Lay's potato chips has to think twice before passing up that thirst-quenching bottle of Pepsi or Mountain Dew across the aisle.

In the back offices of supermarkets and discount stores, Pepsi is waging another kind of war, pitching itself not just as a supplier but also as a partner in a highly competitive business. Combined, Pepsi, Frito-Lay and Tropicana account for \$11 billion in retail sales at supermarkets—hefty numbers that Coke can't match. "We represent up to 13% of their profits," says PepsiCo's new senior vice president for sales and marketing, Al Carey. Last month Carey accompanied Enrico and the presidents of Pepsi, Frito and Tropicana on a historic first joint call on a major retailer to remind the customer of those figures.

For Enrico, the re-engineering of PepsiCo could be the crowning achievement of a career filled with magic acts. The 54-year-old chairman started as an associate product manager for Frito-Lay and became president of Pepsi-Cola at 39. In the 1980s he became famous as the cola warrior who beat Coke and bragged about it. As its president in the 1990s he rejuvenated Frito-Lay. Then he turned around the restaurant division before deciding it was too expensive to keep. "Nobody can bulls—Roger, because he knows every one of our businesses cold," says Indra Nooyi, the company's chief strategist. Enrico has spent a long time picking those businesses apart and relearning them, in order to completely reshape them.

What Enrico discovered was that forging a new PepsiCo meant changing a corporate culture that was in love with itself. Pepsi has always attracted some of America's hottest executive talent, and it let these managers run their businesses. In a world where scale matters, such freedom has a price. "Frankly, we had a long-standing culture of autonomous business units," says Frito-Lay CEO Steve Reinemund. So while managers were ricocheting off each other in search of their next promotion, or

chasing new restaurant chains or joint ventures in far-flung parts of the world, Coke stuck with the game it knew, steadily increasing the stakes along the way with billions of dollars of investment in soft drinks, nothing else. "The bet had been made, and we didn't raise or call it," says Enrico. "We didn't even play."

Enrico is not about to let the company's egos get ahead of its capabilities again. "I started out here [as CEO] with a sense of the limitations, not just opportunities," he

to do with cola. The result in 1995, for instance: Coke made \$3.5 billion overseas; Pepsi had an operating loss of \$652 million.

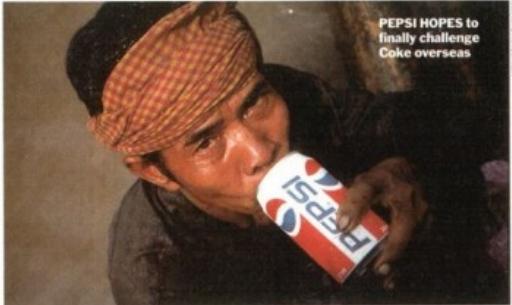
Enrico and his lieutenants learned two lessons from the PCI debacle. One was that the business had to be simplified. The other was that no single manager was hot enough to run his or her operation without full disclosure. "This is about boring consistency," says Peter Thompson, who took over PCI in 1996. "We've moved from individual heroes and silver-bullet management to building capable teams." Thompson is reconstructing the 18,000-employee international operation "brick by brick."

The strategy is beginning to get results. More Pepsi was sold overseas last year than in the U.S., and volumes are growing steadily—faster in 1999 than Coke's.

Pepsi hopes to make its greatest gains in the U.S. this summer, when it unleashes a marketing blitz tied to the *Star Wars* prequel *The Phantom Menace*. Pepsi will spend around \$2 billion exercising its exclusive boasting rights to America's favorite slice of fantasyland. There will be collectible Pepsi cans emblazoned with *Star Wars* characters and gold "Yoda" cans of Mountain Dew, not to mention surprises in bags of Frito snacks.

The Force may be with him, but some cynics out there think Enrico and Pepsi have lost the cola wars for good. One line of reasoning is that Coke is simply too big to topple. Coke, for instance, has added 5 billion cases of sales in 10 years, according to CEO Douglas Ivester. Others say that Enrico's deliberate strategy is tantamount to declaring defeat. Says Tom Pirklo, president of consulting firm Bevmark: "Pepsi has put its tail between its legs and withdrawn."

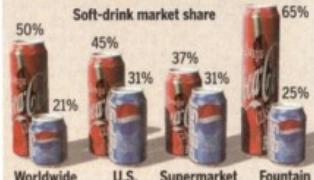
That makes Enrico bristle. "Anyone who thinks we've reduced our commitment to the soft-drink business simply isn't getting the message," he says. Enrico warned his top managers in a recent strategy session not to think things at PepsiCo are going to be predictable. And deep down, Pepsi's cola warriors may never lose their thirst for battle. "We are going to take back what is rightfully ours," says Nooyi, the strategist. Let the games begin again.



PEPSI HOPES to finally challenge Coke overseas

CATCH UP

To close the gap with Coke, Pepsi must increase its share overseas. In the U.S. it does well in retail stores, but to grow it needs to break Coke's stranglehold in the fountain business



muses. He put a stop to the management churning by decentralizing control and altering compensation schemes, offering incentives to managers to get the job done, not just look for the next one. Says Enrico: "I want to make sure that we walk the talk around here, not just on philosophy, but on implementation."

The stiffest test for that culture may be in its overseas operations. Not four months after he took over the top job, his largest bottler in Venezuela—run by an old friend—defected to Coke. It was the most public failure of what what insiders referred to as the "\$5 billion house of cards," Pepsi-Cola International. PCI's ambitious, much publicized campaign to stake claims everywhere from Moscow hospitals to Burma came undone in a cascade of bankrupt joint-venture bottling partners and questionable acquisitions that took Pepsi into dozens of businesses that had nothing



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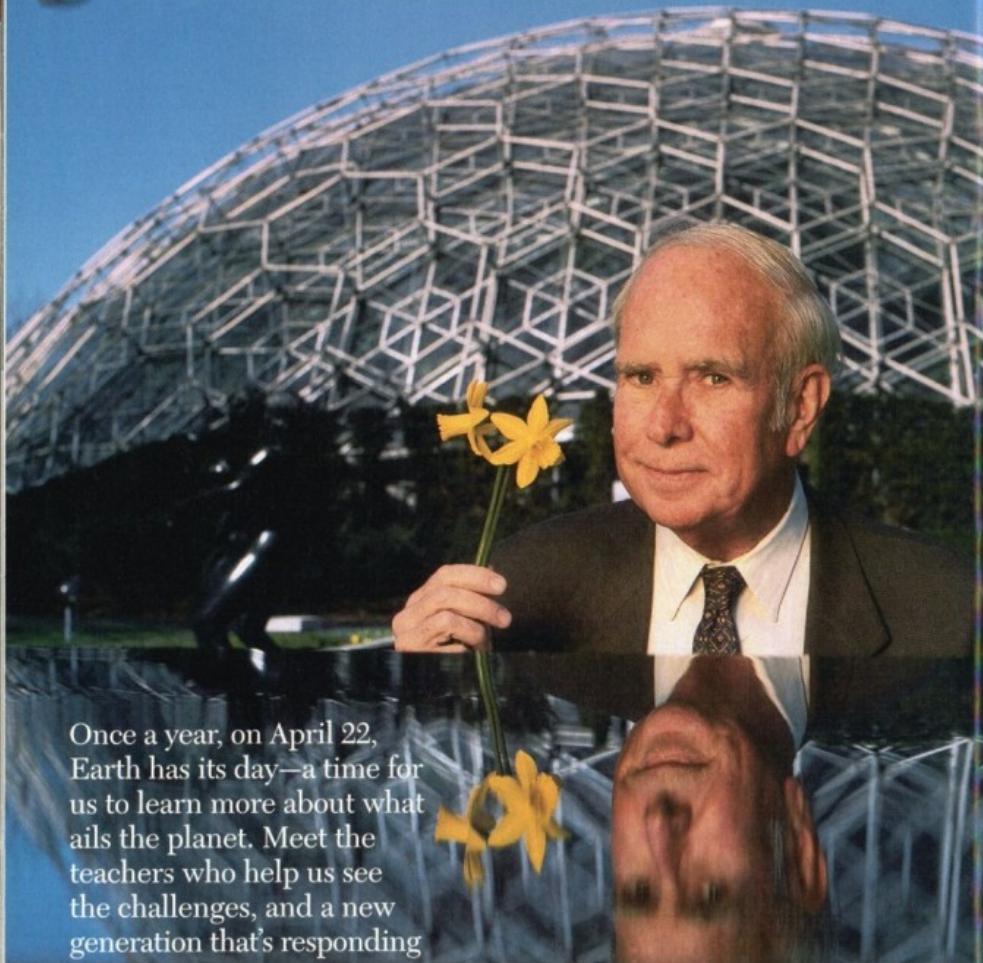
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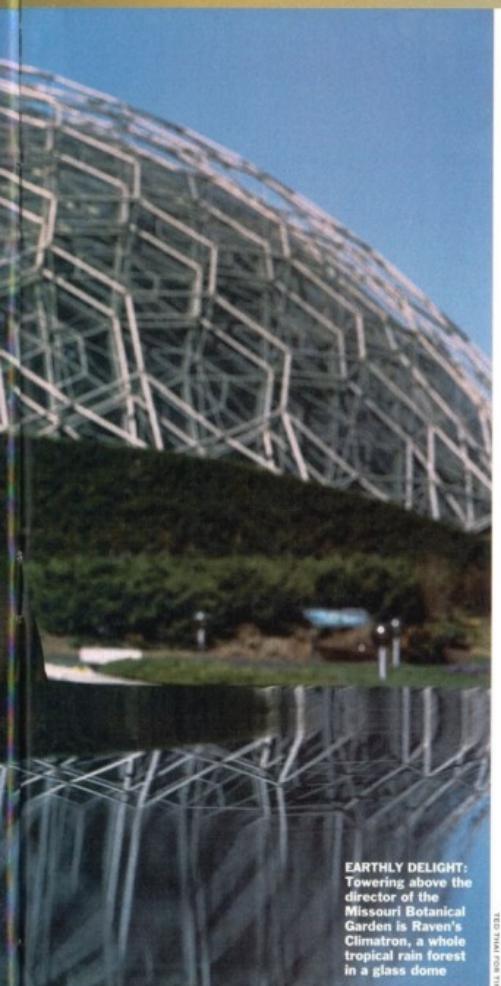


FOR THE PLANET | EARTH DAY SPECIAL



Once a year, on April 22, Earth has its day—a time for us to learn more about what ails the planet. Meet the teachers who help us see the challenges, and a new generation that's responding

HEART AND FL



EARTHLY DELIGHT:
Towering above the
director of the
Missouri Botanical
Garden is Raven's
Climatron, a whole
tropical rain forest
in a glass dome

PETER RAVEN

The World Is His Garden: Better Tread Carefully

By ROGER ROSENBLATT ST. LOUIS

It is interesting to contemplate a tangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent upon each other in so complex a manner, have all been produced by laws acting around us.

—Charles Darwin, *The Origin of Species*

THINK OF IT!" SAYS PETER RAVEN, THE DIRECTOR OF THE MISSOURI BOTANICAL GARDEN, AS HE STANDS BESIDE A TABLE IN THE RARE-BOOK ROOM OF THE GARDEN'S LIBRARY AND READS ALOUD FROM THE FINAL PARAGRAPH OF DARWIN'S *Origin of Species*. "All that difference, elaborately constructed, produced by laws!"

Then he rereads the entire paragraph, which gives one chills, partly for Darwin's understatement. What the author deemed "interesting to contemplate" was nothing less than the world's biological structure, which he (and others) had discovered, and which now, at the end of his monumental study, he quietly celebrated in sublime summation. The "tangled bank" he had initially attributed to an unnamed power, but in the third and subsequent editions, he included God in the evolutionary process. The book now ends on this glorious sentence, over which Raven exults: "There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved."

The passage is beloved by Raven because it is a celebration of biodiversity, the most elegant since *Genesis*, and it is the cause of biodiversity—of maintaining endangered plants and preserving the wilderness—that drives all he has done with the Missouri Garden for nearly 30 years. Rather than being merely a place where pretty flowers are on show (though it is that as well), the garden is a microcosm of the wide green world. It is not a zoo for plant life. The last thing Raven wants is to create a repository for the vegetation that has been destroyed outside the garden.

Thus he rails in speeches against the menace of a "sixth extinction," one unlike the prior five extinction spasms, the last of which came 66 million years ago. Those were brought about by natural phenomena. When it occurs, the sixth mass extinction of living organisms will be brought about by people, by a mushrooming population that has doubled in 40 years, to 6 billion, and by human carelessness and commerce. In the 21st century, which Raven would like to see called "the age of biology," he says we must learn to "master the diversity of living organisms and use the properties of those organisms as a kind of palette to build sustainability."

Instead of cultivating one garden, he looks to everyone's. He protects, collects, lobbies, studies, preserves and expands his territory. His networks like a press agent but believes it is up to individuals to keep what's living living. "When it ends up," he tells me, "the world is not going to be one homogenized place. It's going to have bright spots, richer places and more beautiful places. And the reason that will happen is that individuals took responsibility and did something." As it was in the beginning, the world is a garden.

OWERS



FOR THE PLANET | EARTH DAY SPECIAL



BENIGN DESTINY:
The Blue Boulder
Cascade is part of
a dreamscape that
conspires to make
one forget time

STEVEN MONT

"We have relatively short lives, and yet by preserving the world in a condition that is

So Raven looks to the wide world to build other countries' capacities for sustainable development. Two areas that he regards as especially critical are Madagascar and the northern Andes. Madagascar has half as many plants as all tropical Africa (about 11,000), and the great majority are found nowhere else. The Missouri Garden has been active there since the early 1970s, helping train and support the country in evaluating and protecting threatened areas. In the northern Andes, Colombia, Ecuador and Peru are home to at least one-fifth of the world's biodiversity, including perhaps 60,000 species of plants, endangered by development and poorly studied. The garden has been cooperating with these nations to help them work out their own plans for the wise use of resources. Raven is volubly opposed to anything that smacks of American big-footedness in these endeavors.

His is one of those special minds that succeed with both the particular and the general, with individual and collaborative pursuits. His boyhood in San Francisco was spent roving vacant lots, searching for specimens. An only child, he began growing caterpillars into butterflies at the age of six. At eight he became a student member of the California Academy of Sciences. At 12 he joined the Sierra Club. At 15 he discovered a member of the heather family, a Presidio manzanita, which had not been seen for 50 years. This subspecies, *Ravenii*, was later

named for him. He did his undergraduate work at Berkeley, got his Ph.D. at UCLA and entered teaching, but not a cloister; he also developed a gift for bringing people together for worthwhile projects.

All this training has produced a 62-year-old man of appealing parts. He dresses like a banker and has the face of a kid who is ready to be pleasantly surprised. In conversation he remembers every ball he has tossed in the air, and just when you think that a long discourse is about to fall off the earth, he brings it tidily home. His voice lifts upward, giving everything he says, including instructions to his staff, confidence with gentleness. And he is funny—not so much on his own, but he likes to quote the witty things said by others, drawing on material from a range of sources that include Lincoln, Oscar Wilde and Joe Garagiola.

RONALD WOODWARD

He leads me on a tour of his world, which like the greater world, having grown from a simple beginning, has evolved into some wonderful forms. The garden is both terrestrial and a dreamscape, a deliberate arrangement of living things that makes one forget about time and engages all the senses without demanding logic. It is the outer life meant to reverberate in the inner life, which is what it evidently does for Raven.

This oldest botanical garden west of the Mississippi opened to the public in 1859, the same year *Origin of Species* was published, and was the inspiration of an En-



EYE ON DIVERSITY The garden's Heidi Schmidt gives specimens the once-over

glishman, Henry Shaw. In 1819, at 18, Shaw arrived in the river town of St. Louis and took half a day's horseback ride westward until he came to a piece of ground that his imagination claimed. When he became rich 20 years later, he bought the property and turned it into a horticultural display that today, thanks largely to Raven's benign manifest destiny, covers 79 acres and extends its research work over much of the globe.

Raven has a very green thumb. Under him the garden has recently acquired a multimillion-dollar research center from Monsanto, and he is looking toward a \$146 million Donald Danforth Plant Center, named for the former president of Ralston Purina. The garden advertises almost as many names of donors as of plants. The library contains 122,000 volumes. Tropicos, a botanical database, attracts thousands of hits a month. When Raven first came to the garden in 1971, he had 85 employees and a budget of \$650,000. Today there are 354 people on staff, and the budget is \$20 million.

Among the garden's components are an azalea-rhododendron



LEI BIRNBOIM/PHOTO



S worthy of us, we win a kind of immortality. We become stewards of what the world is."

garden that explodes with color—red, pink, yellow and white in April; Linnean House, one of the last buildings constructed by Shaw, where camellias bloom in late winter; a bulb garden (tulips, hyacinths, narcissuses); a scented garden (geraniums and lamb's ears); two rose gardens; a garden for irises and day lilies; a garden for aquatic plants; a Japanese garden; an English garden. The most visually impressive structure is the Climatron, a geodesic greenhouse dome à la R. Buckminster Fuller that rises 70 ft. at the center and measures 175 ft. in diameter at the base. It covers half an acre but appears much larger—a whole tropical rain forest under glass.

Raven and I walk around it beneath a vast green umbrella that looks more lush than a real rain forest. There are a dozen of bugs and a loud rush of falling water. We make our way among a density of exotic plants, an endangered Hawaiian plant called alula, a cacao tree, conifers and vines that trap insects. A banyan tree towers on its stilts. A red-and-black bird flits in the branches.

"That's something I haven't seen before," says Raven, noting the pale lavender of a particular iris. He stares at the flower with innocent interest. "Stay here long enough," he says, "and you appreciate what Darwin meant when he wrote in praise of differences." A sign at the exit exhorts visitors to save the rain forest "before it is too late." On the way out I am stopped by an orchid



FEEL THE COLOR From top, tulips, irises and orchids are the outer life meant to reverberate in the inner life

whose rose-colored leaves alternate with gold. The leaves are shaped like fragments of bells.

The admiration of the garden's appearance Raven leaves to me and other tourists; he acknowledges that the plants and flowers are lovely, but his attentions go elsewhere. Before he became an eco-administrator and a biopolitician, Raven was a pure and first-rate scientist—still is—and he views science—process—as the garden's most important exhibit. Apart from his grander design of using the place as a reminder that the world calls out to be preserved, his mission is to make the garden the largest plant-research center in the world. Current projects, which are huge, include volumes on the flora of North America and China.

He seems especially at home in the herbarium. With nearly 5 million specimens, it is sort of the garden morgue. Here are dried samples mounted on sheets of paper, each with a record of discovery—who found what when. Some specimens go back 300 years. The herbarium is a storehouse of diversity, organized in manageable units. I watch him

hold a page of bug-nibbled leaves and stare with the wonder one might reserve for orchids.

But Raven is equally himself with the bigger picture, which accounts for his affection for Darwin's last paragraph. In his office in the late afternoon, he returns to the world outside his garden. "Individuals express themselves through others," he says. "They influence other people, they share values, and that way an individual's life goes on, generation after generation."

"The earth is the only place we know in the universe with living organisms; thus it is special. With 6 billion people on the planet, it becomes harder and harder to measure the effects of individuals, yet the outcome is formed precisely by the interaction of individuals. All that adds up to the ongoing stream of humanity and human accomplishment. We have relatively short lives, and yet by preserving the world in a condition that is worthy of us, we win a kind of immortality. We become stewards of what the world is."

"Gardeners?" I ask him.

"Gardeners," he says.

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FOR THE PLANET | EARTH DAY SPECIAL

DAN ALON, NADER AL KHATEEB

A Flight for Peace Begins in a Birdhouse

THE LESSER KESTREL, A SMALL RED, BLACK AND GRAY bird of prey, is more hawk than dove. But in a symbolic sense it carries an olive branch in the Middle East. Confronted by devastating changes in its habitat, the bird is endangered in Israel and the Palestinian territories. Now dozens of Jewish and Arab schoolchildren, recruited by conservationists Dan Alon and Nader al Khateeb, have come together to help save the kestrel—and learn lessons in cooperation and friendship.

Alon, 31, is the Jewish director of the Israel Ornithological Center. Al Khateeb, 39, is a Palestinian engineer who runs the Water and Environment Development Organization in Bethlehem. Despite their very different backgrounds, Alon and al Khateeb share a passion for preserving



NICKI RODENBERG FOR TIME

beleaguered creatures like the kestrel. The bird, a native of the Mediterranean region that feeds on crickets and other insects, builds its nests in the gutters and ventilation ducts beneath the red-tiled roofs of the traditional stone houses that once dominated the Middle East. Over the years, though, many of the old-style homes have been knocked down or modernized, depriving the kestrel of its favorite nesting crannies. In the past four decades, the area's kestrel population has plummeted, from 6,000 to 600. For similar reasons, the bird is also threatened in such countries as Spain, Italy, Greece and Jordan.

Three years ago, Alon set out to reverse the decline by lobbying for the preservation of green spaces as feeding grounds and nailing nesting boxes high on the outside walls of homes. He chose older houses that had been refurbished, so that the birds could return to familiar haunts. The birdhouses are plain pinewood, about the size of a shoebox, with an entry hole in front. So far, Alon and his colleagues in Operation Kestrel have put up 40 boxes in Jerusalem and 50 in Haifa. "The kestrels are dependent on people," says Alon, who started bird watching as a 13-year-old growing up on a kibbutz near Nazareth, and oversees 16 other conser-

vation programs. "We had eight pairs breeding in our boxes last year. We can't say yet that we've saved them from extinction, but we can say the population is increasing rather than decreasing." A tiny camera inside one of the Jerusalem boxes shoots videos of eggs hatching, mothers feeding chicks, fledglings learning to fly—and Alon puts the images live on the Internet (www.birds.org.il).

This year Alon has joined forces with al Khateeb and a Palestinian conservation crew to put up birdhouses in the West Bank. Together they had the wonderful idea of enlisting the help of children—from both sides of the Middle East divide. In February, 50 Arab kids from Jericho and 30 Jewish kids from Jerusalem converged at



COME TOGETHER
Ali Khateeb, above left, and partner Alon brought a crew of Jewish and Palestinian kids to a Jerusalem zoo to build new homes for the threatened lesser kestrel, top

Jerusalem's Biblical Zoo to learn to make the birdhouses and get to know one another. Coexistence didn't come easily. A Jewish fifth-grader, tears of frustration flowing down her cheeks, rushed to her teacher. An Arab boy wouldn't give her a turn hammering nails into a box they were supposed to be building together. She spoke only Hebrew, he only Arabic. The Israeli teacher explained the problem—in English—to his Palestinian counterpart. The boy relented and let the girl have her chance.

"The lesser kestrel is a nice, noncontroversial subject," says Alon. "It won't solve the Israeli-Palestinian conflict, but it can create understanding between people who are destined to live together, whether they like it or not." Al Khateeb strongly agrees. "We share a common environment," he says. "We have to work together if we are to achieve results. Our kids grew up thinking all Israelis were soldiers who wanted to shoot them. Their kids thought all Palestinians were terrorists. We want to promote the environment as a tool to build peace."

Sound too idealistic? Not to Ali Erakat, an 11-year-old trooper in Operation Kestrel with a baseball cap turned backward on his head and braces on his teeth. This assertive young man happens to be the son of Sa'eb Erakat, the tough-talking Palestinian peace negotiator. Asked how he felt about meeting and working with Israeli kids, the younger Erakat replied, "I feel happy if they feel happy. None of us want the birds to be in danger. Things like this help us to make peace between kids." Even his cagey old father would have to smile at that.

—By Eric Silver/Jerusalem

"It won't solve the Israeli-Palestinian conflict, but it can create understanding."

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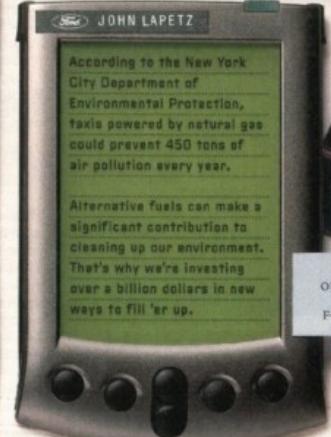
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FACTORY-SUPPLIED PROPANE
PICKUPS YOU CAN BUY.

Propane

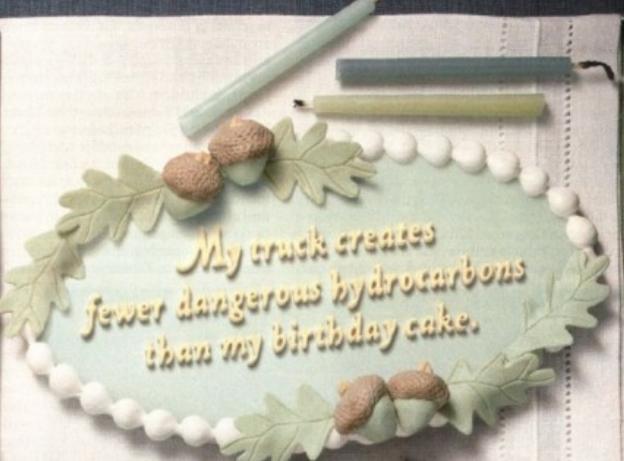


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ENVIRONMENT



FOR THE PLANET | EARTH DAY SPECIAL

NEVADA DOVE, FABIOLA TOSTADO, MARIA PEREZ

Don't Mess Around with The Toxic Crusaders

THICK NOTEBOOKS OF TEST RESULTS, CHEMICAL ANALYSES AND groundwater-safety studies. Not your typical teenage reading. But Maria Perez and Fabiola Tostado, both 15, and Nevada Dove, 18, pore over this stuff as closely as most kids read music 'zines. Some nights you can find them at Nevada's house, reading the latest report out loud, highlighting anything that sounds weird. Her brother calls them the Toxic Crusaders, and with good reason. As three young members of Concerned Citizens of South Central Los Angeles (CCSCLA), Maria, Fabiola and Nevada are activists in the cause of environmental health. They've handed out containers in

drinking water can cause skin rashes, kidney and liver ailments and—at high enough levels—brain damage and even death.

That's what alarms Maria, Fabiola and Nevada. They don't go to school at Jefferson, nor do their brothers and sisters, but they are outraged just the same. Says Nevada: "It's terrifying that these kids are going to a school that's contaminated. In a way they are my brothers and sisters, because they are African-American and Hispanic children who one day may be my neighbors."

Maria and Fabiola worked for Clean & Green, a community-beautification program, before joining CCSCLA. Nevada is a seven-year veteran whose mother Melodie Dove is a CCSCLA leader. Formed in 1985 as one of the first African-American environmental groups in the U.S., CCSCLA is a force in the growing "environmental justice" movement, which questions why sources of pollution always seem to be located in poor neighborhoods.

CCSCLA campaigned for months to keep Jefferson New Middle School from opening, and the group's junior members were on the front lines. Maria, Fabiola and Nevada called government agencies,

JAN RENNER/NEW YORK DAILY NEWS
TOP: AP/WIDEWORLD

passed out flyers and went door to door to alert parents. But the school district determined that Jefferson was safe and opened its classrooms last July. Says school-district spokesman Erik Nasarenko: "The problem with the groundwater and the soils deep beneath the surface ... does not affect people on the surface."

The Toxic Crusaders were not convinced. The day the school opened, the girls were on hand with a fact sheet about chromium. As they tried to pass it out, the police made them move 100 ft. from the school. "I think they were expecting us to do a protest or something," says Maria, "but we just wanted to hand out information."

The next month the girls called a community meeting, inviting representatives from the school district and environmental agencies. After Maria, Fabiola and Nevada got through with them, they may have been sorry they

which oil can be recycled and given warnings about lead poisoning. Most of all, they're agitating for the temporary closing and cleanup of Jefferson New Middle School.

Jefferson is the first public school to open in South Central Los Angeles in 30 years. Built on a site that was once home to a maker of refrigerator shells and, earlier, to a defense contractor that made fuel tanks for World War II fighter planes, it serves about 2,000 students, mostly poor, mostly minority. But across the street is the former home of a chrome-plating shop, a site so hazardous that it is scheduled for cleanup under the federal Superfund program. During construction of the school, it was discovered that the soil and groundwater under the building were contaminated with hexavalent chromium, a tasteless, odorless and colorless toxin. Exposure through food, air or

went. When a schools official claimed that in an emergency, Jefferson's children would be evacuated to 9200 South Broadway, the girls pulled out photos proving that this was the address of a vacant lot. "We really nailed him down," Fabiola recalls. "We said, 'If you made a mistake like that, what other mistakes have you made?'"

Among the girls' allies is state senator Tom Hayden, who has taken up the issue of toxins in schools. Says Hayden: "They're very focused, very educated, very driven to understand the way the system works around them." The girls have been regulars at hearings the senator has held. Los Angeles plans to build 51 schools over 10 years—some of them possibly on old industrial sites.

Unafraid of confronting their elders, Maria, Fabiola and Nevada are proud of what they've done—and plan to keep doing. "We're the new generation," says Nevada. "One day you're going to have to stand up on your own two feet for something you believe in. Why not get an early start?"

—By Deborah Elder Brown/Los Angeles

TOUGH TRIO

From left, Nevada,

Fabiola and Maria

are agitating for

the closing and

cleanup of a school

built on a bed of

contaminated soil

a defense contractor that made fuel tanks for World War II fighter planes, it serves about 2,000 students, mostly poor, mostly minority. But across the street is the former home of a chrome-plating shop, a site so hazardous that it is scheduled for cleanup under the federal Superfund program. During construction of the school, it was discovered that the soil and groundwater under the building were contaminated with hexavalent chromium, a tasteless, odorless and colorless toxin. Exposure through food, air or

B A R B A R A K E A R N S

Welcome to Class and Watch Out for the Deer

AGAGGLE OF FIFTH- AND SIXTH-GRADERS TRAILING HER, BARBARA Kearns stops on her cross-country skis, shushes the children's squeals, and muses, "Listen to the stillness. It's so quiet, but nature is moving all around us." The kids reflect on her words for two seconds before pushing one another over in yelping heaps of skis and poles. Kearns, an elfin woman with twinkly eyes, smiles at the antics and pushes ahead into the thickening snow blurring the Adirondack wilderness ahead. She's leading her students on an overnight field trip to discover the beauty and history of this mountain range in upstate New York. Kearns is convinced that getting out into nature, "fondling nature," she calls it, will someday enable these kids to be better people.

In fact, she has staked her professional reputation on it. Kearns, 60, is superintendent of Newcomb Central School, serving Newcomb, N.Y. (pop. 550) on Route 28N in Adirondack State Park. Her public school is the smallest in New York, with 69 students from prekindergarten through 12th grade. The two-story brick schoolhouse was built for 400 children in 1948, when a titanium and magnetite mine was operating nearby. After the mine closed about a decade ago, the student body dwindled, and the state pressured the town to shut the school.

That forced Kearns to figure out how to make Newcomb Central a special place, a school no one would want to shutter. Realizing she was in the middle of "the biggest classroom in the whole world," she decided to give her curriculum an environmental fo-



cus, emphasizing Adirondack ecology and history "smack in our backyard." Walk into the school now, and an eerie silence echoes off the polished corridor floors. Classrooms are empty because many of the kids are off in the woods. The kindergarten class is at the town's little nature center down the road. Groups of students go out with Ameri-corps volunteers three days a week to track animals, learn compass and map-reading skills and study water usage and pollution. High schoolers pursue research projects: a study of how highway salt affects vegetation or a local lumber company's harvesting practices.

But nothing beats an overnight expedition. Fifth-grader Ryan Gregson spots a herd of deer in a meadow and exclaims, "Wow, I didn't know there were so many deer so close to where I live." And he won't soon forget.

—By Christopher Hallowell/Newcomb

SKI LESSONS
Leading a field trip in the forests of Adirondack State Park, the tireless superintendent, in blue, makes school a wild experience

PHOTO BY MARY ANN TAYLOR FOR TIME

WILL VINSON

Litterbugs! This Kid Is Out to Clean Up the Town

LIKE MOST COLLEGE TOWNS, GAINESVILLE, FLA., HOME TO THE University of Florida, is an eco-conscious place. But even here, motivating youngsters to police the environment can be as hard as getting them to help out with the dishes after dinner. Sometimes it takes a kid to inspire other kids to care—a kid like Will Vinson, 12, whose aluminum-can-recycling crusade lit a fire under the city's next generation. Since he was a nine-year-old fourth-grader at Littlewood Elementary School, Will has united classmates, teachers, recycling firms and other local companies in a bid to rid Gainesville's school grounds of trash and develop youth recycling programs. Says Will: "I knew that if I did it, the other kids would stand up and do it too. We don't do it if adults just lecture to us."

It wasn't so easy. Will, now a sixth-grader at Gainesville's Westwood Middle School, repeatedly called a local recycling contractor, asking the firm to donate crushers, and a supermarket, looking for carts for can collection. Even then, his dad Tim, a chemist at UF, and his mom Betsy, who teaches at the university's speech and hearing clinic, had to tell the companies Will was serious.

Next he needed to convince other kids. He wrote entertaining spots for Littlewood's closed-circuit TV program (his slogan: "We love the 3 Rs: reduce, recycle, reuse!"), but at first many students resisted—and threw banana peels and other unsuitable garbage into his recycling bins. "One kid even got sick in one of them," Will recalls. Soon his buddies started to get the message, and the school's Girl Scout, Cub Scout and Boy Scout troops joined in, helping him recycle hundreds of pounds of cans that netted more than \$100 for Littlewood's Head Start preschool program.

At Westwood, Will, a student senator, has turned much of his attention to Florida's successful youth antismoking campaign, but he's stayed close to the recycling operation he started. Whenever he travels to Atlanta to see his grandparents, who don't recycle, he bags up their cans and hauls them back to his bins and crushers in Gainesville, but not before he tries to see an Atlanta Braves game. Will is a big baseball fan, and he would just love to keep Gainesville's schoolyards as green and clean as the field his idols play on.

—By Tim Padgett/Gainesville

BAG IT, BOYS
His classmates were resistant at first and dropped banana peels in his bins, but soon they learned to love the 3 Rs

PHOTO BY JEFFREY D. MILLER FOR TIME



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ENVIRONMENT





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BACK

SEARCH

CLICK
//



THE INTERNET

LOST IN CYBERSPACE

The World Wide Web offers an education, but watch where you're going

By JOHN SKOW

THIS ENVIRONMENT REPORTER'S IDEA OF INTERACTIVE TECHNOLOGY was to tap the computer case with a 12-in. adjustable-end wrench to correct vapor lock and improve e-mail reception. Mostly on instinct, he patrolled the environmental outdoos and avoided the World Wide Web. The information superhighway vanished last year, he noticed, at least as an annoying metaphor, and maybe the World Wide Web would go away too.

But no. The Web is still here, and without it, journalistic obsolescence looms (yawns? festers? creeps in petty pace? click one). So this reporter sets out (urls forth?) onto the Internet. And what does he discover?

There appears to be more virtual environment on the Web than there remains real environment in the actual, tattered, non-virtual world itself. Or nearly. Yet doing research on the Internet is like taking a two-year-old for a walk. Pretty pebbles and deeply meaningful small sticks present themselves, but enlightenment seldom proceeds in a straight line. There is always some beguiling irrelevancy to be clicked, which is good. Often, however, the environmental pilgrim discovers to his surprise that there is not much depth of information. A surprising number of green websites are little more than 16-bit fund-raising brochures.

The Web is praised as a wondrous educational tool, and in some respects it is. Mostly, though, it appears to be a stunning advance in the shoring up of biases, both benign (one's own views) and noxious (other views). Whether anyone's opinion is changed by the Web is an open question, though of course the same could be said of Balkan politics and air strikes. A six-month debate on an Environmental News Network forum (www.enrn.com/community/forum), about agribusiness, organic farming and Monsanto's genetic engineering of plants, began in September with sweet reason: "In the U.S. only 10.9% of the average American's income is spent on food. Compare this to Britain at 11.5%, Sweden 14.5%." Fairly quickly the discourse descended to a mudball fight. A farmer who thinks chemical fertilizers and pesticides are fine dismissed an organic farmer as a gardener and added, "Man, you drip of liberalism; it almost stinks." Another nonorganic disputant offered, "More than anything, I cannot STAND ignorant hysterics seeking to ban or destroy whatever technological innovation currently threatens their precarious emotional stability." From the other side came this: "You are a vile individual who licks the boots of the well-heeled, and you'll never see the light about the virtues of unspoiled nature and wildlife ... You are just full of technocrap!" The mudballs still fly, and all are welcome. Park your chewing gum and razors at the door.

Or punch in another Internet address, like www.succenter.org, which brings up a useful activist group I know, Arizona's Southwest Center for Biological Diversity. As usual, the Southwest Center is tormenting the U.S. Fish and Wildlife Service to add deserving beasts and plants to the Endangered Species List (the beluga whale in Alaska's Cook Inlet is a candidate). There's good informa-

tion here, on a wide array of eco-skirmishing, but what I print out is something I've never laid hands on, a copy of the Endangered Species Act itself, the great Magna Charta of U.S. environmentalism. Yes, the Interior Department probably would have sent a copy of the ESA if I had phoned and asked. But the Web is right there: reach up and pick the overhanging mangos.

A friend recommends www.envirolink.org, a widely used green portal, and this leads across the Atlantic to the Danish Wind Turbine Manufacturers Association, which offers detailed text on wind power in Dansk, Deutsch or English. I am glad to see that the Danes, my forbears, are hoisting a wetted finger toward non-pollutive electricity, but the download time is more than an hour, and that is too windy. Click the "back" button.

Returned from Denmark, but still on Envirolink, I stumble on controversy. It seems that last spring, Lycos, a prominent Internet search engine, promised support to Envirolink, which was started in 1991 by Josh Knauer, then a freshman at Carnegie Mellon University, and is chronically underfunded. Envirolink was to get financing, and Lycos would be allowed to look green. (So says news analysis downloaded from the New Haven *Advocate* newspaper. Stealing good stuff is what the Web is for.) For three months, if you clicked on "Lycos saves the planet," you reached Envirolink. Then Lycos canceled the contract. Norm Lenhart, a senior editor at something called *Off-Road.com*, had complained that Envirolink offered entry to such activist groups as Earth First and the Animal Liberation Front. Norm who? At what? *Off-Road.com* is an Internet site for fans of off-road vehicles, with ties to the anti-environmental "wise-use" movement. The website is a click away from *Blue Ribbon* magazine, another off-road lobbying outfit, sponsored by Honda, Yamaha, Ski-doo and Polaris, whose motto is "preserving our natural resources FOR the public instead of FROM the public."

Here is one of the back alleys in which the Web can be brilliantly educational. Will enough high school kids, rummaging for term-paper material, find this alley and see what it means? Which is, perhaps, that virtual power, not real size, is often what's important. Envirolink has few staff members and little money, but it has power, because it is an entry to 400 enviro and animal-rights websites. *Off-Road.com* is an unknown, except to its communicants, who are mostly Western motorheads determined to keep Forest Service logging roads open at a time when rising environmental awareness makes it clear to the wider society that they should be closed. Lycos, briefly eager to save the planet with Envirolink, is a real business with real funding. Did Lycos, which now carries the Environmental News Service in place of Envirolink, cave in to an insignificant squawk from the far reaches of Webland? Lycos execs say no, and it is true that Envirolink shows up among the search engine's top-rated enviro websites. But the conservative American Land Rights Association seems to think yes, and offers a Web address (www.lycos.com) at which Lycos may be thanked for right thinking. What's a Web crawler to believe? Well, for one thing, that Japanese car, motorcycle and snowmobile

There appears to be more virtual environment on the Web than real environment in the tattered world



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manufacturers—the power here is quite real, not virtual—are trying, through Blue Ribbon magazine and its parent, Blue Ribbon Coalition, to defeat U.S. environmental policy.

An innocent enviro wandering the Web—or an innocent black-hearted polluter—learns to click skeptically. Brave souls who reach www.radio4all.org/anarchy/fakes get a list of “anti-environmental” groups, most of them with wonderfully benign-sounding names: the Abundant Wildlife Society of North America, the California Desert Coalition, the Evergreen Foundation, the Environmental Conservation Organization, Mothers’ Watch. Maybe most of these really are benign. Duh! I check out the National Wetlands Coalition, a big-biz coalition against wetlands, and the Global Climate Coalition. The cover of this last org has been blown for some time. It’s a consortium including oil and car companies that are mightily interested in stalling enactment of the Kyoto accords on carbon-dioxide emissions. Will a high school student patching together a paper on global warming buy the GCC’s line, which says go slow because scientists disagree? Or click further and discover that, no, scientists really don’t disagree? But, 2,500 of them say Earth is in a period of potentially dangerous warm-

ing, to which human activities contribute to an alarming degree?

The wanderer learns a lot about prairie dogs, which are in sharp decline and should be listed as threatened, says the World Wildlife Fund (www.panda.org). And about the last Congress, which was insufficiently environmental, according to the League of Conservation Voters (www.lcv.org). I download a superb four-part, college-level course on the ozone hole from the University of Cambridge (www.atm.ch.cam.ac.uk/tour/index.html). And I am assured by www.ecofreedom.org/unibomb.htm that Bill Clinton and Al Gore are environmentalists (a deniable charge, surely) and in league with Earth First! and the Unabomber.

And ... it's 4 a.m.; do I know where my eyeballs are? So—oxymoron alert—a beginner’s conclusion. The Web’s strongest suit, at least as it deals with the environment, is serendipity, random walking. Search engines only pretend to sort out the jumbled and expanding Internet universe. Which, as has been widely noted, is unedited, unowned, unsanitized—though Congress continues to try—and, like the worldwide world itself, decided not guaranteed. Likewise for its environmental subset. Run barefoot through its meadows, but be careful where you put your feet. ■

CLICK HERE

The Web's Wild World

Major environmental organizations have well-organized, slickly produced websites that are worth a visit. Off the beaten cyberpath, however, are many colorful and sometimes quirky sites that show off the Web's greatest asset: its diversity. Here's the lowdown on some sites we liked.

WHERE TO BEGIN

A good entry point for Web newcomers with an interest in all things ecological is the appropriately named EnviroLink

(www.envirolink.org). It boasts one of the largest and best-arranged listings of environmental organizations on the Web. Another excellent launch pad is the Amazing Environmental Organization Web Directory (www.webdirectory.com).

THE RATS HERE ARE GREEN

Eco Mall (www.ecomall.com), like its real-world counterparts, is a great place to browse, be entertained or just hang out. And you'll be linked to all sorts of useful environmental sites. For example, click on “Eco Investments” for mutual funds specializing in the stocks of companies judged to be environmentally responsible, or “Energy Efficient Homes” for a handy list of eco-conscious designers and architects.

GUILT-FREE SHOPPING

Wish you knew more about what goes into the products you buy? Now you can. The Green Marketplace (www.greenmarketplace.com) promises that its goods, which range from household soaps to gardening supplies, weren't tested on animals and don't contain toxic chemicals. You can order online.

YOU VOTED FOR WHAT?

Check out the League of Conservation Voters site, which lets you track how your U.S. Senators and Congressmen voted on anti-pollution laws or Endangered Species Act revisions. Don't like what you've learned about your lawmakers on Capitol Hill? The LCV has listed their e-mail addresses so you can give them a piece of your mind. Go to www.lcv.org and click on “Congressional Lookup.”

WHO'S POISONING YOUR TURF?

You don't want chemicals spewed into your backyard, do you? The Scorecard (www.scorecard.org) features interactive maps that enable you to home in on the companies you should be concerned about. Simply enter your ZIP code and go.

ONE-STOP NEWS SHOPS

For news junkies, the Environmental News Network (www.enn.com) provides a clearinghouse for relevant bulletins from the Associated Press, Reuters and other wire services. Full access costs \$12.95 a year; for those unwilling to pay, ENN writers churn out four free stories daily, plus an array of multimedia reports. Another good source for all the eco-news you can use is at www.ens-lycos.com.

BEAR ESSENTIALS

As Web design goes, the Bear Den (www.nature-net.com/bears) is a tad unsophisticated, but it's a treasure trove of facts on grizzly, brown and black bears and pandas (which, biologists tell us, aren't bears but big cousins of the raccoon). There's plenty of information about easily bearable books, videos and other websites, plus a frighteningly good picture gallery.

I WANT MY MTV

Well, you can have it. The World Wildlife Fund has teamed up with MTV to provide 60-second videos aimed at inspiring viewers to environmental heroism. Also worth a look are the video Earth Reports, viewable with the Vivo or VDO plug-ins. Go to www.panda.org and click on “Video Library.”

PEDAL OFF THE METAL

Getting people out of their cars and onto bicycles is the mission of the International Bicycle Fund (www.ibike.org). But first, a little reading. The site has the scoop on air-pollution dangers, safe biking practices and even cross-country bike trips in Africa and Cuba.

WHERE THE HOGS ARE

Did you know that 10 million hogs poop nearly 19 million tons in North Carolina each year? It's a mounting problem wherever pigs are raised. Hog Watch (www.hogwatch.org) includes an up-to-the-minute poop counter, interactive maps and audio clips of citizens telling you just how bad the stench has become.

NATURAL RIGHTS AND WRONGS

What is the life of a spotted owl worth? Maybe it's a matter of your personal values. Click on the Environmental Ethics website at www.cepl.unl.edu for background on this wonky field and information about related books, journals and academic programs.

YOU CAN HAVE A DREAM

A change of mind-set may be all that stands between humanity and a healthy environment, according to the Dream Change Coalition (www.dreamchange.org). The site invites visitors to join trips (real, not virtual) into the Amazon and the Himalayas to learn about eco-concepts known as dream changing and psychonavigation. “Earth-honoring changes in consciousness,” says the coalition, are what’s needed to put the planet on a path toward environmental and social balance. Far out!

GET A JOB

Hate your boss? Would you like to work for the environment instead? Look at Earth Works (ourworld.compuserve.com/homepages/eworks/) for job listings by industry. You can post your résumé on the site and sign up for e-mail alerts about new positions. —By Morris Barrett

DENIS HAYES

Mr. Earth Day Gets Ready to Rumble

WHERE DO YOU GO WHEN YOU NEED SOMEONE TO RALLY 200 million people? An ex-President, perhaps, or a former dictator? Whenever the environmental movement needs someone to gather the troops worldwide, it turns to a tall, understated activist who rides his bicycle to work, wears flannel shirts and has a unique ability to herd the masses toward a common goal. His name is Denis Hayes, but you can call him Mr. Earth Day. He launched the first one in April 1970, turned it into a global festival for Earth Day 1990 and is looking ahead to the biggest eco-event he can imagine: Earth Day 2000.

Hayes, 54, didn't set out to be an environmentalist. He grew up in Camas, Wash., a small paper-mill town where the air stank from sulfur fumes. Like most other people there, he loved the outdoor life, but his concern over the damage the mills were doing to his beloved forest was tempered by the realization that the industry was also his dad's employer. Not until his undergraduate days at Stanford in the '60s did he become a rabble rouser, and then his target was not pollution but war: he helped lead more than 1,000 students in a campus takeover of a weapons-research lab.

The activist settled down and entered Harvard Law School with an eye to influencing public policy, but a fateful assignment his first semester changed his life. Required to be an intern in a government office, Hayes called Gaylord Nelson, then a liberal U.S. Senator from Wisconsin, and volunteered to organize a series of teach-ins across the country to call attention to the environment. Energized by the memories of the ravaged forests of his youth, he dropped out of Harvard and devoted his time to organizing rallies, street demonstrations and trash cleanups. It all culminated with the first Earth Day, when 20 million people put on the biggest show of power the country had seen.

Except for its radical fringes, environmentalism moved into the political mainstream, and so did Hayes. By the time he was 35, he was appointed by President Jimmy Carter to head the Solar Energy Research Institute in Colorado, and clean power became his passion. After finding the time to finish his law degree at Stanford in

FIRST RITES
The demonstrations in April 1970 were primitive by recent standards, but they spurred the passage of antipollution laws

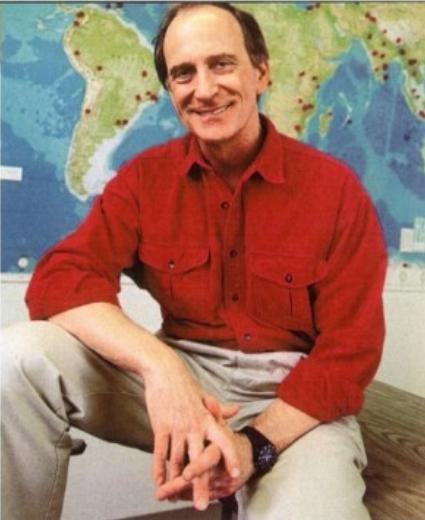


PHOTO BY JEFFREY D. STONE

1985, Hayes was drawn back onto the environmental front lines by groups looking forward to the 20th anniversary of the first Earth Day. The threat of global warming caused by the burning of fossil fuels had thrust the environment back into the headlines, and it was time to make Earth Day 1990 a global happening. Hayes didn't disappoint. Spurred on by his organizational efforts, nature lovers staged spectacular events around the world, from a 500-mile human chain across France to a gathering of 35,000 in Tokyo Bay. In all, 200 million people paid homage to the planet.

In 1993, Hayes began running the Bullitt Foundation, an endowment in Seattle that funds green projects in the Pacific Northwest. But the coming of the new millennium brought another test: take Earth Day to new heights in 2000. Besides the rallies, concerts, seminars and TV shows, Hayes plans to use a magic wand he didn't have in 1970 or 1990: the Internet. Through e-mail, websites and live Web events, Earth Day participants will be globally linked as never before. "Earth Day is for the environment that Martin Luther King Day is for civil rights," Hayes says. "We know what to do. But can we summon the political will and courage to make it happen?" —By David S. Jackson/Seattle

TALK TO THE HERO

THE EVENT
Online chat with Denis Hayes, one of Earth Day's founders and top planner for Earth Day 2000

THE TIME
April 22 at 5:30 p.m. (E.T.)

THE PLACE
America Online (Keyword: AOL Live)

Visit Hayes' website for Earth Day info at www.earthday.net, featuring a searchable database of events around the globe



TED ROZUMALSKI/BLACK STAR



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TO: ALL
FROM: FRANCISCO JAVIER BERTAUD

We just spent the morning building nesting cavities for ducks. And yesterday we planted wildflowers and a new species of cactus.

That may seem a little unusual for someone who works for a Ford assembly plant but you see, I'm the official biologist. Our facility in Cuautitlan, Mexico is home to lots of wild geese, falcons, lizards, and shrikes.

Our team of 15 people works full time to preserve and enhance the wetlands and wildlife in our 260-acre compound. A few feet from where our coworkers build F-series trucks, we're planting thousands of trees and the hummingbirds are laying eggs!

I have a nice job, don't you think?

FRANCISCO JAVIER BERTAUD



FRANCISCO
JAVIER BERTAUD



Who needs chemical abrasives?
In Germany, we use crushed
walnut shells.



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LEADERSHIP

Is Al Gore a Hero Or a Traitor?

By JAY BRANEGAN WASHINGTON

AL GORE THE SENATOR WROTE *EARTH IN THE BALANCE*, A warning about global warming and other looming catastrophes of "the environmental crisis." At once passionate and wonky, the book reflected years of personal study and policymaking. Larded with stirring phrases—"We must make the rescue of the environment the central organizing principle for civilization"—and bold prescriptions, like eliminating the internal-combustion engine in 25 years, *Earth in the Balance* secured Gore's place in the environmentalists' pantheon as America's greenest national politician.

Al Gore the Vice President has been an influential adviser and workhorse for the Clinton Administration on many issues, including trade, with his high-profile trouncing of Ross Perot in a NAFTA debate; foreign policy, with his up-front role in the Kosovo crisis; and technology, where he has championed the multibillion-dollar effort to wire all schools to the Internet (even if he didn't create it).

But now that Gore is running for the White House and preparing to step out of Clinton's shadow, environmentalists and other voters want to know how green the Vice President really is. Does his record on the environment as Clinton's right-hand man match the exalted and ambitious rhetoric of his book, or has he, as he phrased it in *Earth in the Balance*, succumbed to the "tendency to put a finger to the political winds and proceed cautiously"? In other words, is Al Gore the candidate the guy who wrote the book?

His own answer is a quick and unequivocal yes, and there's plenty of evidence to back him up. Thanks to Gore, the Clinton Administration is the most pro-environment in a generation. Gore has placed staunch allies in top environmental positions, most notably his one-time Senate legislative director, Carol Browner, as boss of the Environmental Protection Agency, where she has been a tenacious pollution fighter. The next proof that

will be tough new EPA proposals, expected by the end of the month, for regulations mandating cleaner gasoline and lower limits on auto pollution, particularly from sport utility vehicles. The Administration has pushed through Congress important legislation, such as the California Desert Protection Act, which covers more public land than any other conservation law affecting the Lower 48 states. Clinton and Gore largely beat back—with some exceptions—an assault on environmental laws and regulations by Republicans when they captured the House and Senate in



1994, and have found ways around hostile legislators to implement policies favored by conservationists, like reining in the U.S. Forest Service's road-building program.

The green lobby has never had better White House access and is consulted early about legislation and regulations, following years of virtual exile under Reagan and Bush. "We're part of the process now," says Dan Weiss, the Sierra Club's political director.

And so is Gore. For instance, he ignored the advice of his own experts and flew to the 1997 Kyoto climate-change treaty negotiations, which were about to collapse. He announced a shift in the American position and personally lobbied several foreign delegations. The result was a breakthrough, and a treaty that calls for developed countries to cut their emissions of harmful greenhouse gases, including the carbon dioxide that comes from burning coal and gasoline. "It was his presence that helped break the whole thing open," says the chief American negotiator, Stuart Eizenstat.

Perhaps most important, Gore doesn't distance himself from his book, which opponents have called "kooky," among kinder descriptions. Because it was published well before Clinton plucked him from the Senate, Gore could claim he was being deliberately outrageous to stir debate. But he does no such thing. "There's not a statement in that book that I don't endorse. Not one," he said last month during an interview in his West Wing office. "The evidence has firmly up the positions I sketched there."

So, case closed? Not so fast. While Gore has been enthusiastic in his commitment, he has been pragmatic in his tactics. Politics is the art of the possible, and even less is possible when you're only

DIANA Walker FOR TIME

SHOWING THE BOSS Clinton gets environmental tips from his second in command, during an outing along the California shoreline of Lake Tahoe



MESSAGE IN THE MOUNTAINS
In Montana's Glacier National Park, where the ice has been receding, the Vice President warned about global warming

current form—and abruptly ended the meeting. The green lobbyists concede that the public isn't yet ready to back painful measures to combat global warming, but contend that a political donnybrook led by the Vice President, even in a losing cause, would raise awareness. Not so, says Gore. "We lost the fight in 1993," he observes, referring to the far-reaching "BTU tax" on fuels that went down to defeat. "We're not yet winning the fight for the proposals we have now. Losing on impractical proposals that are completely out of tune with what is achievable does not necessarily advance your cause at all," and could set it back by convincing politicians that the issue is too risky to revisit.

Stronger policy proposals, Gore argues, have to go with public awareness and political support. "You cannot have one without the other," he says. A presidential campaign might be a good place to stir up a tempest about climate change, but so far, it appears unlikely that Gore will do so. His strategists figure,

quite rightly, that he can't be elected President solely as Mr. Environment and Technology. So they plan to fill out the rest of Gore's portfolio. His still evolving stump speech emphasizes such proven vote getters as education and health care. The main environmental program he will push is "livability," a grab bag of measures to fight urban sprawl, preserve open space and battle traffic congestion that should appeal to important suburban swing voters.

If all this means that Gore will soft-pedal his signature cause, climate change, for the next 1½ years, that's bad for the earth and unworthy of a politician who has a record for being principled and decisive. With jobs plentiful and the economy strong, there never will be a better time to be aggressive. True, the environmental community must do more to build grass-roots support, but who is Al Gore if not the country's leading environmentalist? If the environment is ever to be civilization's "central organizing principle," surely it should be the central focus of Gore's campaign. That would force his Republican opponents and any Democratic rivals to respond, giving voters the opportunity to judge who can best protect the environment—and civilization—as we head into the 21st century.

—With reporting by
Dick Thompson/Washington



The Vice President. Antipollution proposals have run afoul of other powerful government players, particularly Deputy Treasury Secretary Lawrence Summers, described by a former Administration official as a "Darth Vader on the environment."

To some of Gore's green allies, his willingness to compromise has been a source of quiet frustration. Last week leaders of nine top environmental groups wrote him to voice their "deep disappointment" that the Administration hasn't produced a credible program to meet the Kyoto targets. "It's very clear that Gore has the knowledge," says Howard Ris, executive director of the Union of Concerned Scientists and one of the letter signers, "but we haven't seen the full exercise of political will to move that forward." Says Gore's most vocal green critic, the National Environmental Trust's Phil Clapp: "I don't question the Vice President's commitment against global warming, but so far, it's all talk and no action."

The problem was clear last August at a meeting in the Roosevelt Room between Gore and the CEOs of the leading environmental groups, who presented him with a set of options to cut carbon-dioxide emissions from the two biggest sources, cars and coal-fired power plants. Curbing the pollution from coal would involve controversial moves against many electric utilities, but the U.S.—and Gore—had to show leadership by backing the idea, they insisted. The room grew suddenly frosty, and Gore, who in previous months had been speaking out on climate change and fighting internally for more antipollution funding, said, "Name a Senator who would support me." He then gave a lecture on global warming's vexing politics—the Senate would soundly reject the treaty in its

The room grew suddenly frosty, and Gore said, "Name a Senator who would support me"

The Last Resort

A controversial breast-cancer therapy pits women against insurers

By JEFFREY KLUGER

TAWNYA GEISBUSH WAKES UP EVERY day fighting two battles—one against breast cancer, the other against her insurance company. It's hard to say which is the more stubborn opponent.

Geisbush, 32, a veterinarian from Phoenix, Ariz., was recently found to be suffering from metastatic breast cancer, an especially aggressive malignancy that had already ranged well beyond the site of the original disease. Eventually she and her doctors agreed they should attack the advancing cancer with what many people believe is the most potent weapon available: high-dose chemotherapy accompanied by a transplant of stem cells, precursors of disease-fighting immune-system cells.

No sooner did she steel herself for the procedure, however, than her insurer, the Trustmark Insurance Co., made things more complicated. Since the \$90,000 treatment was still considered experimental, it was ineligible for coverage under the terms of Trustmark's policy. "Whether it's a \$100,000 charge or a \$10 charge, we make our decisions based on that contract language," says Lloyd Sarrel, Trustmark's assistant vice president for benefits. Geisbush, understandably, has bigger things than contracts on her mind. "I'm in a fight for my life," she says. "I shouldn't be having this fight with the insurance company."

Geisbush is not alone. In the past decade, more than 12,000 American women have taken their chances with transplant therapy, in many cases only after battling their insurers to make sure the bills got paid. Lately, public opinion—plus a few multimillion-dollar lawsuits—had begun to change that. Ten states require insurers to cover transplants; most health plans elsewhere in the U.S.—seeing which way the legislative wind was blowing—have decided to go along too. Patients know, however, that a company that makes up its mind to offer coverage can later change it, and that laws requiring reimbursement can always be rewritten.



That's why cancer advocates and the insurance industry were so anxiously awaiting last week's release of the most definitive studies yet undertaken to evaluate the treatment. The news, on its face, was not good. Transplant therapy, the studies suggest, may not improve survival odds any more than traditional therapy. The findings, however, are preliminary, and further study may overturn them altogether. By week's end, all that was certain was

that an already heated debate would get hotter still and that patients who want the therapy are not giving up hope. "With this treatment," says Geisbush, "at least some people have survived."

Battling cancer with immune-system transplants is a straightforward—if searing—procedure. Used only with the most lethal cancers, it involves flooding the body with toxic chemotherapy drugs in an effort to overwhelm the malignancy. While the

drugs do kill cancer cells, they also destroy most of the disease-fighting cells in the immune system. That's why doctors harvest marrow cells from the bones or stem cells from the bloodstream—both of which give rise to new immune cells—before they begin chemotherapy. When the treatment is done, these cells are reinfused into the body, in the hope that the immune system will rebound. Punishing as the therapy is, advocates say it can work, and patients are clamoring for it—but at no small price. In the U.S., well over half a billion dollars may have been spent on breast-cancer-related transplants in the past 10 years.

What no one has ever figured out is who should foot the bill. Many HMOs want no part of the treatment, branding it as experimental. The problem is, the only way to change that designation is for women to undergo the treatment as part of a clinical study. And that gets pricey unless insurance companies chip in. "Insurers should be willing to pay," says Dr. John Durant, of the American Society of Clinical Oncology. "They'd probably save money with fewer relapses and more premiums."

Some insurers, however, had long dug in their heels over transplant therapy, and last week's announcement may make them dig deeper still. The five new studies looked at two types of breast cancer: high-risk cases, in which the disease has spread to 10 or more lymph nodes; and metastatic cases, in which it's migrated even further. Of the three studies that focused on high-risk cases—surveying a total of 1,462 breast-cancer patients—only one found a statistically significant advantage for transplant therapy. The two studies that focused on metastatic disease showed no real advantage in terms of survival. One of those studies did show that metastatic patients who underwent transplants had longer remission periods before relapsing—no small thing for people facing a potentially lethal disease. Moreover, the patients in all five studies must be followed for several more years before the research can be considered complete. Nonetheless, concedes Dr. Edward Stadtmauer of the University of Pennsylvania, who headed one of the trials, "it's not clear that this treatment is a major benefit."

But it's also not certain that it isn't, and that's where things get muddy. It took experimenters years to collect the volunteers they needed to give their findings any statistical oomph—in part because women didn't want to risk being in the half of the sample group that received conventional therapy instead of

the transplant. Over that time, transplant methods improved, and it is thus possible that higher mortality rates from women earlier in the research are dragging down more positive results from women later on. For now, the only answer appears to be more and better studies.

How insurers will react to all this is unclear. US Healthcare (now merged with Aetna) and some Blue Cross/Blue Shield plans helped bankroll three of the recent studies, an act of good corporate citizenship that seemed to signal a willingness to keep paying for transplant treatments in breast-cancer cases. A doctor working with Kaiser-Permanente, the nation's largest HMO, offers more direct reassurance. "It will be up to the doctor and the patient," predicts oncologist Louis Fehrenbacher.

IN BRIEF

Foods That Fight Cancer

Prevention is always preferable to a cure, and while much of the data are still preliminary, a growing body of evidence suggests that the local green market may be a rich source of anticancer agents. In particular, certain fruits and vegetables seem to have powerful tumor-fighting properties that researchers are just beginning to appreciate—and to study. A sampling of the current crop of findings:

■ **TOMATOES** Scientists have long known that men who eat cooked tomato products such as pasta sauces tend to have lower rates of prostate cancer. Until last week, however, the data were anything but conclusive. A study reported at last week's meeting of the American Association for Cancer Research shows that daily doses of lycopene, an antioxidant that ripens tomatoes and gives them their red color, may not only prevent prostate cancer but shrink existing tumors as well. Men who took 30 mg of the supplement (the quantity found in 2 lbs. to 3 lbs. of tomatoes) had lower levels of prostate-specific antigen—an indicator of cell growth—and smaller tumors.

■ **SOY** Previous studies showed that women who eat soy products such as tofu and soy milk are less likely to develop breast cancer. But it was never clear why. Now a small study of two dozen women may point to an answer: soy seems to keep circulating levels of estrogen low, which in turn inhibits breast cells from proliferating. Women in the study drank more than four glasses of soy milk a day for one month, and their peak blood levels of estrogen dropped 40%.

■ **BROCCOLI** Among all the cancer-fighting vegetables, broccoli, cauliflower and cabbage stand out, especially in cancers of the bladder. Regardless of how many fruits and vegetables a group of 48,000 men ate, only those consuming broccoli and related cruciferous veggies reduced their risk of bladder cancer, according to a report in the *Journal of the National Cancer Institute*. Broccoli and its kin may fight cancer by detoxifying organisms in the gut that would otherwise trigger malignancies in bladder tissue.

For HMOs that have been disinclined to offer coverage, however, last week's news offers little incentive to do things differently. Legislative pressure—plus the ongoing threat of more jackpot lawsuits—may yet force the hands of those holdouts. But whether that will be enough for women like Tawnya Geisbush, still awaiting an O.K. from her insurer, is unclear. "I have a fairly small window of time to work with," she says. By the time the company is persuaded, one way or the other, her window may have already closed.

—Reported by *Rachele Kanigel/San Francisco and Dick Thompson/Washington*



The Gay Side of Nature

Even as moralists and activists continue to debate homosexuality, many species casually practice it

By JEFFREY KLUGER

GIRAFFES DO IT, GOATS DO IT, BIRDS and bonobos and dolphins do it. Humans beings—a lot of them anyway—like to do it too, but of all the planet's species, they're the only ones who are oppressed when they try.

What humans share with so many other animals, it now appears, is freewheeling homosexuality. For centuries opponents of gay rights have seen same-gender sex as a uniquely human phenomenon, one of the many ways our famously corruptible species flouts the laws of nature. But nature's morality, it seems, may be remarkably flexible, at least if the new book *Biological Exuberance* (St. Martin's Press), by linguist and cognitive scientist Bruce Bagemihl, is to be believed. According to Bagemihl, the animal kingdom is a more sexually complex place than most people know—one where couplings routinely take place not just between male-female pairs but also between male-male and female-females. What's more, same-sex partners don't meet merely for brief encounters, but may form long-term bonds, sometimes mating for years or even for life.

Bagemihl's ideas have caused a stir in the higher human community, especially among scientists who find it simplistic to equate any animal behavior with human behavior. But Bagemihl stands behind the findings, arguing that if homosexuality comes naturally to other creatures, perhaps it's time to quit getting into such a lather over the fact that it comes naturally to humans too. "Animal sexuality is more complex than we imagined," says Bagemihl. "That diversity is part of human heritage."

For a love that long dared not speak its name, animal homosexuality is astonishingly common. Scouring zoological journals and conducting extensive interviews with scientists, Bagemihl found same-

sex pairings documented in more than 450 different species. In a world teeming with more than 1 million species, that may not seem like much. Animals, however, can be surprisingly prim about when and under whose prying eye they engage in sexual activity; as few as 2,000 species have thus been observed closely enough to reveal their full range of coupling behavior. Within such a small sampling, 450 represents more than 20%.

That 20% may spend its time lustily or quite tenderly. Among bonobos, a chimpanzee-like ape, homosexual pairings account for as much as 50% of all sexual activity. Females especially engage in repeated acts of same-sex sex, spending far more than the 12 or so seconds the whole transaction can take when a randy male is involved. Male giraffes practice necking—literally—in a very big way, entwining their long bodies until both

partners become sexually aroused. Heterosexual and homosexual dolphin pairs engage in face-to-face sexual encounters that look altogether human. Animals as diverse as elephants and rodents practice same-sex mounting, and macaques raise that affection ante further, often kissing while assuming a coital position. Same-gender sexual activity, says Bagemihl, "encompasses a wide range of forms."

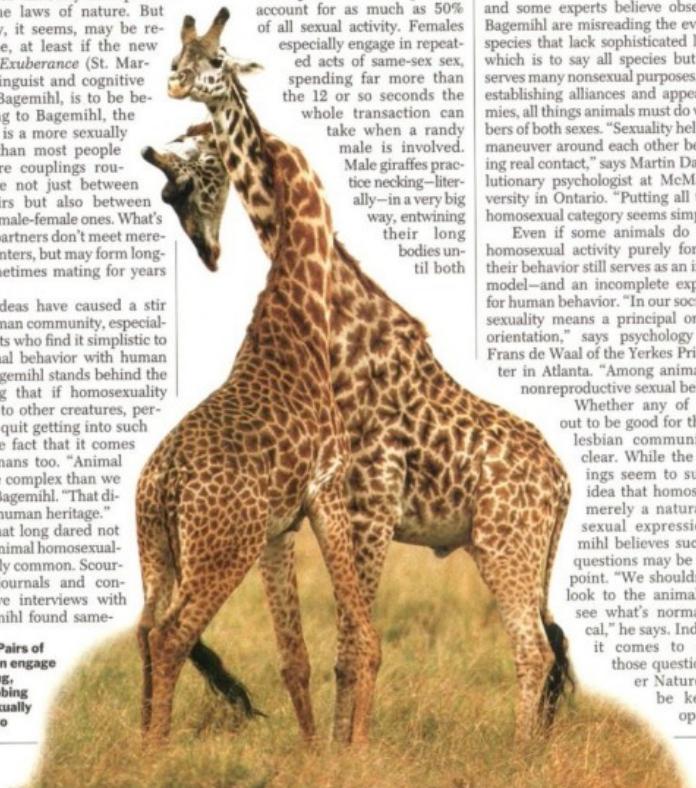
What struck Bagemihl most is those forms that go beyond mere sexual gratification. Humboldt penguins may have homosexual unions that last six years; male greylag geese may stay paired for 15 years—a lifetime commitment when you've got the lifespan of a goose. Bears and some other mammals may bring their young into homosexual unions, raising them with their same-sex partner just as they would with a member of the opposite sex.

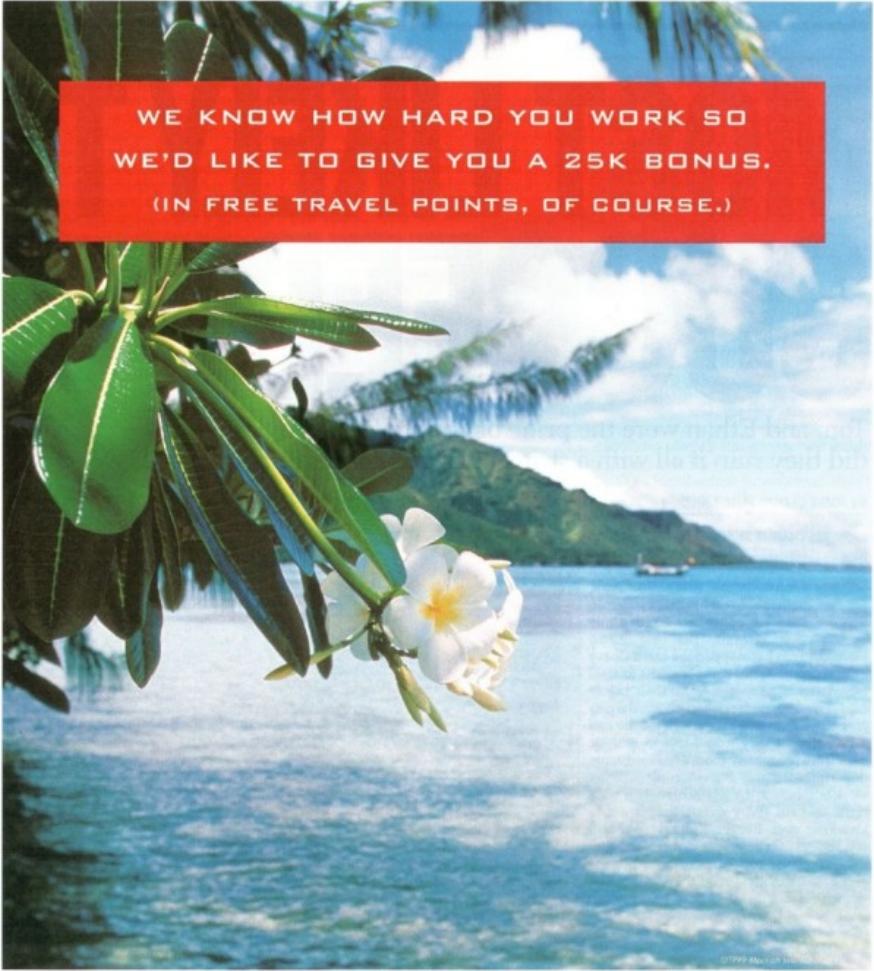
But witnessing same-sex activity and understanding it are two different things, and some experts believe observers like Bagemihl are misreading the evidence. In species that lack sophisticated language—which is to say all species but ours—sex serves many nonsexual purposes, including establishing alliances and appeasing enemies, all things animals must do with members of both sexes. "Sexuality helps animals maneuver around each other before making real contact," says Martin Daly, an evolutionary psychologist at McMaster University in Ontario. "Putting all that into a homosexual category seems simplistic."

Even if some animals do engage in homosexual activity purely for pleasure, their behavior still serves as an incomplete model—and an incomplete explanation—for human behavior. "In our society homosexuality means a principal or exclusive orientation," says psychology professor Frans de Waal of the Yerkes Primate Center in Atlanta. "Among animals it's just nonreproductive sexual behavior."

Whether any of this turns out to be good for the gay and lesbian community is unclear. While the new findings seem to support the idea that homosexuality is merely a natural form of sexual expression, Bagemihl believes such political questions may be beside the point. "We shouldn't have to look to the animal world to see what's normal or ethical," he says. Indeed, when it comes to answering those questions, Mother Nature seems to be keeping an open mind. ■

HEAVY PETTING: Pairs of male giraffes often engage in extreme necking, entwining and rubbing and becoming sexually aroused as they do





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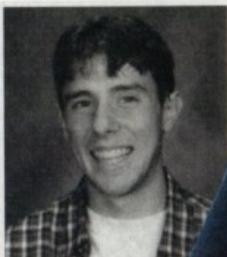
MOST LIKELY TO SUCCEED

Tom and Ethan were the pride of Grant High. Why did they ruin it all with a string of armed robberies?

By JOHN CLOUD PORTLAND

E THAN IS SHRIEKING. IT WOULD BE funny, but he is bleeding from the scrotum, and that's just not funny. In the adrenaline rush, he has shoved his dad's gun into his waistband and accidentally shot himself. His best friend Tom has stopped the car, a Chevy Suburban they paid someone \$80 to steal for what was supposed to be their big finale. The Oregon teens had planned a major heist, Ethan would later say, maybe half a million that they would tote in athletic bags from the money room at a Nordstrom department store. But that plan didn't work out; in fact, the whole night had gone right to hell. (Why didn't they stick to knocking over Burger Kings?) Tom had worked as a clerk at Nordstrom—and duh—someone recognized him when he and Ethan ambled in. So they walked out without taking a thing. They should have gone home, but after weeks of planning, they were primed. They settled on Rustica, a neighborhood Italian place with a nice sourdough. The petrified manager handed over \$500, and it was in the heady aftermath that not far away Ethan shot himself.

So here we are. Five hundred bucks, a hole blown into a very delicate place and DNA evidence drying on the seat of a stolen car. Though Ethan had the wound, both teens were ashen when they got to the hospital—"My God, they were white as sheets," friends would later say. The tale the boys concocted—some highly unbelievable stuff about a gang attack, followed by only slightly more believable stuff about a joyride gone bad—had made the cops



CAMPUS SUPERSTAR:
Curtis in a 1997 yearbook
photo, and last summer in court

suspicious. Rustica would be the inauspicious conclusion to a 12-month robbery spree by two boys who were, everyone thought, model young citizens.

It wasn't supposed to end like this. Something like 20 previous jobs had been nearly effortless, too easy to be planned. Just run in, wave guns (one of which didn't work), and the dorks unloaded cash drawers, whole tills—here, take it, don't kill me.

Kill them? Whatever. This was just high school ridiculousness—O.K., with an edge, a sharp one, but no one was going to die. The robbers weren't stupid. They were cool kids, campus superstars: Thomas Curtis, student-body president, eagle scout at 15, homecoming prince, a good-looking guy with solid parents, that



cute Jenny White for a girlfriend and a non-stop sense of humor, the kind that could always cheer you up. And Ethan Thrower, sweet kid, churchgoer, MVP on the track team, a member of the élite Royal Blues choir, honor roll, yearbook, the whole deal. They were the most popular kids at the biggest school in town, a public school but a prestigious one—it even has a lacrosse team—a place so idyllic that Hollywood came there to film *Mr. Holland's Opus*.

Things aren't so special anymore for Ethan and Tom. They're in the county jail, where if you need a root canal, as Ethan did last month, your lawyer has to file a three-page motion. In November, a year after Rustica, Ethan pleaded guilty to three counts of robbery and promised to apologize to victims in all 20. Now 19 years old, he will spend 8½ years in prison.

If not this week, then soon, Tom will almost certainly also plead guilty to several counts of armed robbery. Pleading means saying yes to 11 years in prison; when you're 19, that's hard to do. The ordeal has driven Tom's mom into deep despair and his friends into bewilderment. "It's still so unreal to me," says his girlfriend Jenny, now at college. "Tom is not the type of person who I could ever fathom would say, 'We're going to rob this place: you drive, you hold the gun, you take the money.' It's just unreal." So what went wrong?

YOU SPEND HALF YOUR time in high school trying to be cool and the other half worrying about tests and practice and college. It's awful. But

what if it isn't? What if kids worship you, as they did Tom, because he stands up to cops who tell students they can't loiter in the street at lunch hour? What if you jog with your coach because he likes you, and success comes easily in extracurriculars, and even when you doze in class, which is kind of often because you're so busy. You wake up with a joke that sets the classroom giggling? What if high school is not terrifying but a breeze?

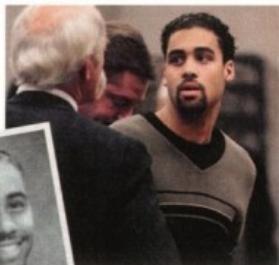
On Nov. 10, 1996, Tom and Ethan were a couple of months into their junior year. That night, Tom and an unnamed

accomplice (investigators say it was Ethan) took a gun to a Howard Johnson's, pointed it at manager Martin Davidson and started counting to 10. Davidson nervously handed over the money, and they were gone. Fifteen days later, according to his indictment, Tom struck again, this time at a Baskin Robbins. Then again the day before New Year's Eve, at a Burger King, where Ethan worked—which was convenient, since Tom didn't have to case the place. Then Baskin Robbins again, victimizing the same unfortunate scooper, a woman said to have nightmares still. But by this time, the boys surely had a feel for it, and if they felt for the victims, they could console themselves by rationalizing that no one was getting shot.

Though the boys stupidly kept robbing near school, which would later create a tidy pattern for prosecutors, they got more creative, more ambitious. They enlisted others, four in all, to serve as drivers or fellow gunmen. There was Todd Seymour, son of a former deputy D.A. in town, a gentle, bright child whose involvement stunned everyone the most. And Celia Reynolds, who met Ethan in middle school and considered him almost a brother. But usually it was just Tom and Ethan, who were careful and lucky. They kept things small time: a natural-foods market, a Barnes & Noble, a goofy New Age store.

It's surprising, though, that they didn't get caught sooner. To save money, the police bureau disbanded its robbery unit in June 1997; no one was examining theft patterns—geography, m.o., gun descriptions. Ten minutes on a crime-mapping computer in New York City might have stopped Tom and Ethan much faster. They were almost nabbed once: neighbors called police to say two boys were casing a Blockbuster store. When cops arrived, the boys escaped on foot (thank you, track team). One dropped a loaded .357 magnum handgun. Later, when the local *Willamette Week* broke the story of the robbery spree, the cop from the Blockbuster incident recognized Tom and Ethan's pictures on the front page.

Tom had always commanded attention. Even as a first-grader, he would go over to neighbor kids' homes and crack jokes that made parents chuckle. He often sketched,



SPOILED HONORS: Thrower faces 8½ years in prison after a plea bargain last year

and people thought he would one day be a cartoonist, maybe something special. But no one was ready for Tom's next act. Not even Tom.

O.K., friends admit, he sometimes didn't know where to draw the line. He was always cracking jokes at others' expense. "He liked to hit them when they were down," says Bill Cromley, Tom's high school Japanese teacher. He liked provoking a woman who clerked at 7-Eleven with sexual wisecracks. Fat kids got it too.

Tom and Ethan fed off each other. They were "feisty, defiant—I don't want to say it, but O.K., borderline a_____" says Joe Simpson, the school's hulklike vice principal and disciplinarian (who suspended Tom at least once). "Together, they were bad for each other. Some say Tom looked up to Ethan for his size"—Tom is shorter and 20 lbs. lighter—"but in terms of being a risk taker, Tom is at the top of the list."

They were tight, but they



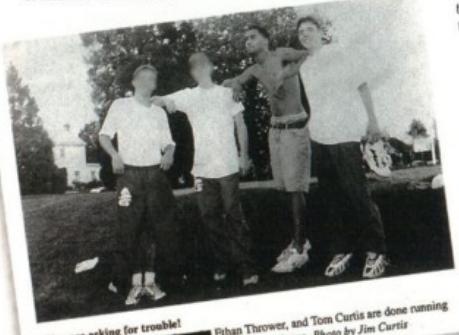
ACCOMPlice: Celia Reynolds grudgingly drove a getaway car; she got a two-year sentence



CRIME

were also competitive in the way that a lot of young male friends are. Tom had more money, but Ethan was cooler; they each had something the other wanted. And armed robbery, in its way, gets you both.

EVEN THOUGH POLICE HAD BEEN SUSPICIOUS of Ethan's self-inflicted



You are asking for trouble! Juniors [redacted], Ethan Thrower, and Tom Curtis are done running and have extra time to come up with their next scheme. Photo by Jim Curtis

BRIGHTER DAYS: As this yearbook entry hints, Ethan and Tom (with two unimplicated friends) were well known pranksters

wound, it took them months to fully link the Chevy Suburban to the Rustica robbery and then to Ethan—and weeks more to confirm the connection with DNA tests. But by the following spring, authorities were finally ready to move. On April 16, 1998, they arrested Ethan at school.

Tom's world was about to collapse—he surely knew Ethan would tell all when faced by menacing prosecutors—but few knew why. Tom and Ethan had told almost no one about the full scope of their extracurriculars. Tom wanted to run, but Jenny begged him to stay for the prom the next night. It was a heart-wrenching, five-hour conversation. Tom was obviously in big trouble, but Jenny didn't know how much. In the end, Tom went to the prom, though friends say he and Jenny looked miserable the whole night.

Tom vanished after that, for months. He stayed in Portland mostly, sleeping at a friend's place or in Washington Park, showering at the Multnomah Athletic Club. There was no plan; he just stayed a step ahead, carrying a bag of his stuff and scraping by on a few bucks here and there. Inexplicably, it took several days for police

to issue a warrant for his arrest. So, when his parents and friends helped him at first, they weren't breaking the law. But after the warrant was issued, the cops hunted him with increasing fervor. One time the entire robbery detail (which had been reconstituted)

rode around the park on mountain bikes in the rain, trying in vain to find him.

But what most tantalized Portlanders about the story, what put it on the front page, was what happened next. Since early in the year, a bunch of Grant kids—upper-middle-class ones mostly, Tom's cohort—had been planning a June trip to Mazatlán, Mexico. Word got out that Tom might go. Authorities talked about sending someone there, but decided against it—they're the local cops, after all, not the fbi. Did they even have jurisdiction?

Tom did turn up in Mazatlán. He was probably safer there than he had been in Washington Park. He probably took a bus—the last cheap and anonymous transportation left to an American fugitive. He hooked up with three dozen classmates, who had flown down together. Though many had supported him, Tom's presence, for once, was a downer. One girl wouldn't stand next to him in photos, and many just pitied him. When they returned, news of his whereabouts traveled quickly. One tearful girl called a detective directly.

Tom fled again, this time to Arizona. Short on cash, he applied for a job at the Fountain Cafe in Mesa, using his real name and Social Security number. Working his charm, he befriended the owners, Mike and Gale Moran, who later told reporters they thought Tom was just wonderful. He always took out the trash, liked to wear the red apron, that sort of thing. They let him drive their car, and he was friends with their daughter. "We had no

idea," they would later say, over and over.

Back in Portland, the cops looked like idiots for letting the 18-year-old slip through their fingers, especially after the *Oregonian* in July reported the Mazatlán trip. They called in the big guns of U.S. law enforcement: *America's Most Wanted*. Detective Kelly Krohn, a tall, goateed man running the investigation, appeared on the TV show on July 25. Tom saw the segment and freaked. He ran again, to Las Vegas. But he knew it was over. He called his dad from a casino, told him he wanted to come in, and three FBI agents arrested him.

THE CITY LASHED OUT. COMMENTATORS complained that Tom's friends hadn't turned him in during the Mazatlán trip—"Portland, we have a problem," a columnist lamented. Prosecutors were even harsher. Five of the six people involved have now pleaded guilty, and because of mandatory sentencing laws, most have received at least four years. Even Celia Reynolds, who reluctantly drove Tom and Ethan to and from a supermarket robbery (and somewhat less reluctantly took a share of the proceeds afterward) will spend a full two years in prison for her role.

Tom's case is likely to be over soon, and he will begin his sentence. He's trying to stay optimistic, says Tom. He writes friends joking letters—he says he tells the days apart by watching a different daily parade of freaks on *Ferry Springer*. But lately he has been housed in a jail dorm with depressing and depressed people, folks on medication and not all there. It can be harrowing.

That emotion is familiar to Pamela Hartley. She still is the manager at the Rustica, where she was eating a late dinner that gashly night when Tom and Ethan burst in. One of them pointed a gun at her and told her to "open the f--- drawer." The experience is with her every



FINAL VICTIM: Hartley says, "They were in a very violent state of mind"

night at the restaurant. "You know, people say they were kids, or they weren't really going to shoot, or whatever," Hartley says. "But they were in a very violent state of mind, screaming, just all over the place. They wanted everyone to think they would hurt them. And we did. I want them to think about that." They will have years to do so. ■

Tom wanted to run, but Jenny begged him to stay for the prom the next night

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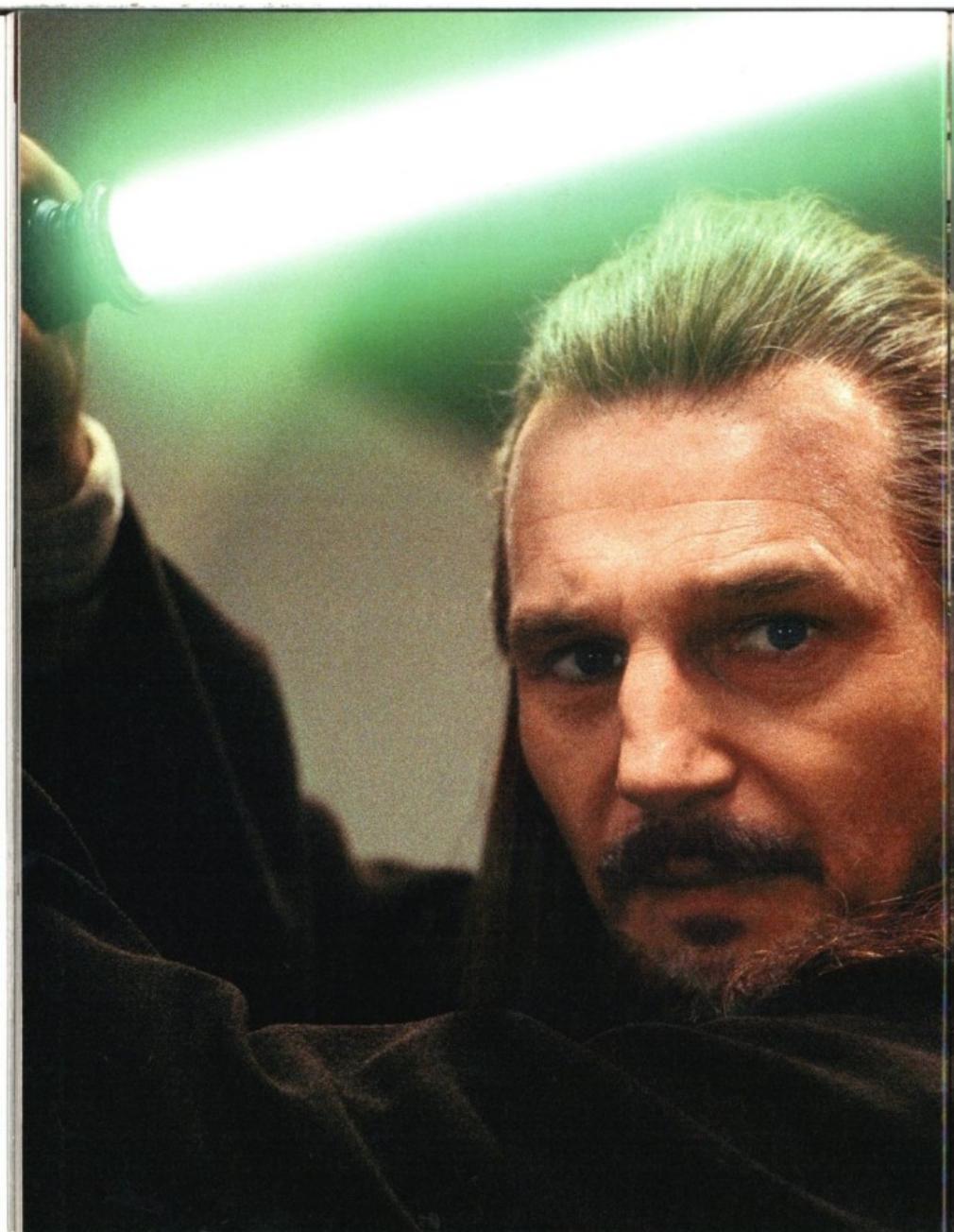
Your daughter inherited it

from you. The lead foot, that is. And you left your vintage Jaguar in the garage. You think. Only you're out of town, so you're not sure. Enter e-services. **E-what?** A security chip in the car recognizes your daughter's key and engages a "soft limit" that won't allow the car to exceed 65 mph. Which, of course, she attempts to do. Instantly, the car sends a signal to a service you subscribe to, alerting you to what's going on. Three thousand miles away, you excuse yourself from the dinner table and as you walk toward the lobby you push your speed dial. Your daughter is no more than three blocks from the driveway when the car phone begins ringing. **How's that again?** Businesses and services are using the Internet in ways that go far beyond today's websites. They're adding a whole new dimension to the term "service." The next chapter of the Internet is about to be written. And it has nothing to do with you working the Web. Instead, the Internet will work for you.

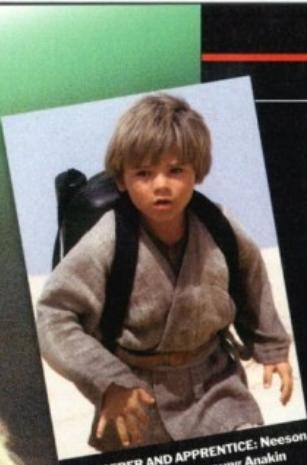
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C I N E M A



SORCERER AND APPRENTICE: Neeson
as Qui-Gon, Lloyd as young Anakin

READY, SET, GLOW!

It's almost here. But if you can't wait, here's a look at the new episode in the **STAR WARS** saga

By RICHARD CORLISS

A SHORT TIME FROM NOW, IN A GALLERIA NOT FAR FROM YOU... the creatures will assemble in a movie-plex queue so long it might seem computer-generated. Guys as tall as Wookiees with Ewok-size children in their backpacks. Teenage girls dreaming they can be Queen Amidala, if only they had her Fabergé-egg earrings. The Anakin-young and the Yoda-old, the dutiful moms and the punks with their Han Solo 'tudes—all the children of *Star Wars* will be waiting for magic to strike in '99, as it did in '77.

What was, will be. On May 19, *Star Wars: Episode I—The Phantom Menace* opens on more than 2,500 screens. Moviemakers like their pictures to have "want-see" (tradespeak for marketable elements), but who doesn't want to see George Lucas' first of three prequels to the most popular trilogy ever filmed? Last November fans paid full ticket price to watch the film's 2-min. trailer, slept through the 3-hr. *Meet Joe Black*, then watched the trailer again. Internet rogues have mined many details from the script, invented the rest and splashed it on their websites. Every magazine but the *New England Journal of Medicine* has already put the movie on its cover. At midnight on May 3, kids will drag their parents, or vice versa, to Toys "R" Us and fill their shopping carts with Lucasian action figures. Want-see? Just try keeping them away.

CINEMA

But for the Starwoids—the trilogy cultists who live in the world Lucas created—this anticipation may be too fevered. It sends a little shudder through the 54-year-old gent who wrote the script alone and, for the first time in 22 years, directed a movie as well as supervised it. "Expectations are so high that no matter what, for some people we'll never make it," he says. "Everybody is trying to steal information. But if we bring out the *Episode I* book early, people get upset that we're giving the story away." Mirthless laugh. "No matter how you do it, you can't win."

Lucas is not alone in wondering if the \$115 million film on the screen will be able to top the spectacle outside; one imagines rampant ticket scalping, if not pitched light-saber battles. Can Lucas keep his huge, devout constituency awed while gently reminding them that it's only a movie? Or has all the promotional percussion deafened the audience, spilled the best secrets? Maybe moviegoers who have read stories like this one will have a slumping sense of *déjà vu* when *Episode I* is finally revealed.

Think that, and think again. You needn't be *Return of the Jedi*'s evil Emperor, pregnant with prescience, to foresee smiles of delicious anticipation as the 20th Century Fox fanfare blares, the Lucasfilm logo fades and the sacred text appears: "A long time ago, in a galaxy far, far away..." You needn't be a Hollywood accountant, mopey about this year's stagnating box office and praying for a *Titanic*-size hit, to forehear the cheers that will surely erupt halfway through the film when the Jedi knight Qui-Gon Jinn (Liam Neeson) casts his laser stare on nine-year-old Anakin Skywalker (Jake Lloyd) and intones, "May the Force be with you."

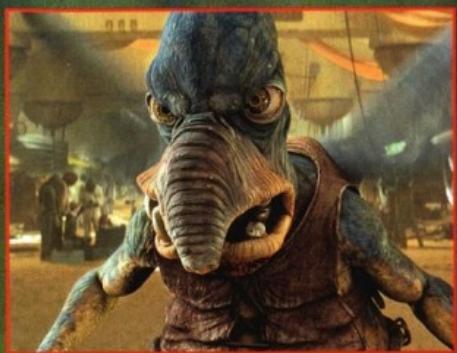
All right, any auteur can replay his greatest hits, exploiting even the youngest viewer's need for nostalgia. And, indeed, *Episode I* will display the old Lucas touches, many of them dating back not just to the trilogy of *Star Wars*, *The Empire Strikes Back* and *Return of the Jedi*, but also to his first features, *THX 1138* and *American Graffiti*. It has the gifted, driven misfit; the young woman above his station but not beyond his dreams; the mystic guide, the imposing villain, the comic sidekick. Yoda, Obi-Wan Kenobi, the evil Emperor and Darth Vader are here—all of them 30 years younger, some barely recognizable. There are lots of battles and a cool drag race. It's a George Lucas movie.

Still, based on reading the script (hasn't everybody?) and seeing scraps of the film, we get intimations of something fresh, handsome, grand. Naboo's golden underwater city glows like an Art

CREATURE FEATURE:
Phantom Menace has scores of fully digitally animated aliens, including Jar Jar Binks; Anakin's owner Watto, top inset; and Gungan chief Boss Nass, bottom inset







A GALACTIC GUIDE

Anakin's World

ANAKIN SKYWALKER

Episode I

■ Young slave who dreamed of becoming a Jedi. The Force is strong within him, but so is an ominous anger.



Like most epic sagas, *Star Wars* features a complex cast of interrelated characters and colorful creatures. That galaxy far, far away just got a lot more crowded

Darth Vader's World

DARTH VADER

Episodes IV-VI

■ After he embraces the dark side, his half-mechanical body—the result of a fall into a molten pit

SHMI SKYWALKER

Episode I

■ Anakin's mother, sold into slavery when he was three years old. She gives up her son so he can follow the Jedi.

SENATOR EMPEROR PALPATINE

Episodes I, VI

■ Representative from Naboo who succumbs to the dark side and causes the disintegration of the Old Republic; ultimately destroyed by Darth Vader

DARTH MAUL

Episode I

■ The double-edged, light-saber-wielding Dark Lord of Sith who pursues Queen Amidala and her allies

DARTH SIDIOUS

Episode I

■ This Sith Lord stays in the shadows and serves as Maul's mentor; his plan is to take over the Republic

GRAND MOFF TARKIN

Episodes IV-VI

■ Palpatine's cronies

PRINCESS LEIA ORGANA

Episodes IV-VI

■ Adopted daughter of Alderaan's Prince

OPEN GATEFOLD

→

■ Palpatine's crony
and chief of the first,
ill-fated Death Star

■ Aunt of Anakin; Prince
Bail Organa; Luke's
twin; goes on to lead
the New Republic



Other Characters and Creatures

OBI-WAN KENOBI!

Episodes I-V

■ Jedi mentor to both
Anakin and Luke. Dies
in a duel with his
former protege but
becomes Luke's spirit
guide



QUI-GON JINN

Episode I

■ Jedi master and
mentor to Obi-Wan.
Has a history of
quarreling with the
Jedi Council; later
recognizes the Force
in Anakin



MACE WINDU

Episodes I, IV-VI

■ Jedi Master and the
oldest human on the
knights' governing
council



YODA

Episodes I, IV-VI

■ Centuries-old
Jedi Master; leader of the
Jedi Council; later
retires to swamp
world of Dagobah and
mentors Luke



R2-D2

Episodes I, IV-VI

■ Astromech droid
discovered on Naboo
ship. Accompanies
Anakin; later bought
by Luke



C-3PO

Episodes I, IV-VI

■ Protocol droid
owned by Anakin;
Luke partners with him



JABBA THE HUTT

Episodes I, IV (special
edition), VI

■ Huge wormlike
clan leader from a
race of gangsters (the
Hutts). Dugedly
pursues Solo over a
smuggling debt



NUTE GUNRAY

Episode I

■ Viceroy of the
Trade Federation that
blockades and
invades Naboo



ADMIRAL ACKBAR

Episode VI

■ Former interpreter
for Grand Moff
Tarkin; defects to the
Rebellion; leads
attack on the second
Death Star



JAR JAR BINKS

Episode I

■ Member of the
Gungans, an
underwater race on
Naboo; becomes the
comic sidekick to
Qui-Gon and Obi-Wan



HAN SOLO

Episode IV-VI

■ Corellian-born
smuggler who aids
Luke, Obi-Wan and
the Rebellion; becomes
Princess Leia's partner



THE EWOKS

Episode IV

■ Tree-dwelling
inhabitants of the
forest moon of Endor;
aid in the final defeat
of the Empire



CHEWBACCA

Episodes IV-VI

■ Han's loyal Wookiee
companion and co-
pilot of the Millennium
Falcon



LANDO CALRISSIAN

Episodes V, VII

■ Proprietor of Cloud
City, which he won on
a bet. Betrays, then
saves Han, Luke and
friends; later joins the
Rebellion



JAWAS

Episode IV

■ Tatooine
scavengers; captured
R2-D2 and C-3PO
and sold them to
Jabba the Hutt's court



Other Characters and Creatures

OBI-WAN KENOBI

Episodes I-VI
■ Jedi mentor to both Anakin and Luke. Dies in a duel with his former protégé but becomes Luke's spirit guide



QUI-GON JINN

Episodes I-VI
■ Jedi master and mentor to Obi-Wan. Has a history of quarreling with the Jedi Council; recognizes the Force in Anakin



MACE WINDU

Episodes I-VI
■ Jedi Master and the oldest human on the knighthood's governing council

YODA

Episodes I, V, VI
■ Centuries-old de-facto leader of the Jedi Council; later retreats to swamp world of Dagobah and mentors Luke



R2-D2

Episodes I, IV-VI
■ Astromech droid discovered on Naboo ship. Accompanies Anakin; later bought by Luke



C-3PO

Episodes I, IV-VI
■ Protocol droid created by Anakin; owned by Leia, then Luke; partners with R2-D2



JABBA THE HUTT

Episodes I, IV (special edition), V
■ Huge wormlike clan leader from a race of gangsters (the Hutt). Deviously pursues Solo over a smuggling debt



NUTE GUNRAY

Episodes I
■ Viceroy of the Trade Federation that blockades and invades Naboo



ADMIRAL ACKBAR

Episodes VI
■ Former interpreter for Grand Moff Tarkin; defects to the Rebellion; leads attack on the second Death Star



THE EWOKS

Episodes VI
■ Tree-dwelling inhabitants of the forest moon of Endor; aid in the final defeat of the Empire



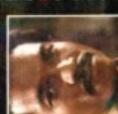
BORA FETT

Episodes V, VI
■ Silent bounty hunter who transports the frozen body of Han Solo from Cloud City to Jabba the Hutt's court



LANDO CALRISSIAN

Episodes V, VII
■ Proprietor of Cloud City, which he won on a bet. Betrays, then saves Han, Luke and friends; later joins the Rebellion



JAWAS

Episodes IV
■ Indigenous race on Tatooine, nomadic and violent; attacks Luke



SAND PEOPLE

Episodes IV
■ Indigenous race on Tatooine, nomadic and violent; attacks Luke

Vehicles

16 Years since Return of the Jedi was released
8 Number of costume changes Queen Amidala makes
2,200 Number of special-effect shots in The Phantom Menace

500 Number of special-effect shots in Titanic
65 Days it took to film The Phantom Menace
\$115 million Cost of making the movie

\$2 billion Amount that Star Wars sponsorship deal

\$4.5 billion Profits from Star Wars merchandising since 1977



3 Number of humans on the Jedi Council
9 Number of nonhumans on the Jedi Council
19 The date in May when the film opens

TRADE FEDERATION BATTLESHIP Huge space fortresses designed to look like cargo hangars actually house a battle fleet; they're the direct ancestors of the Empire's Star Destroyers



Light Saber

A blade of pure energy, created by a power cell and focused by crystals. The beam tends to be color-coded: Sith lords use red; Obi-Wan blue. While most light sabers emit a single blade, Darth Maul's double-bladed variation, shown, provided twice as much action in a climactic duel with Qui-Gon and Obi-Wan.

ARMORED ATTACK TANKS (AATs) These lumbering Trade Federation land ships are not exactly speedster bane, but their heavily armored noses are strong enough to smash through walls

By Chris Taylor
Graphic by Ed Gabel and Cyndie Hoffmann



WISE MEN: Yoda and Mace Windu (Jackson) are elders on the Jedi Council, which must decide if Anakin will "bring balance to the Force"

HANGING ON: Obi-Wan (McGregor) struggles to save himself after toppling into a melting pit during the final face-off with Darth Maul

Nouveau chandelier, while the Jedi knights' home base, Coruscant, could come from a spiffier *Blade Runner*. The new sidekick, a computer-born frog boy named Jar Jar Binks, is a vexing, endearing mix of Kipling's Gunga Din and Tolkien's Gollum, and speaks in a pidgin English ("Yousa Jedi not all yousa cracked up to be!") that will be every kid's secret language this summer. Even on paper, the film's set pieces—a 10-min. Podrace and the climactic battle between the ragged forces of good and the minions of the dark side—have power and razzmatazz.

The human characters are briskly developed in the script. And the cast is certainly tony: Neeson; art-house sex pistol Ewan McGregor as young Obi-Wan; Ingmar Bergman favorite Pernilla August as Anakin's mother; Natalie Portman (Broad-

way's Anne Frank) as the young Queen; and, brooding on the Jedi Council, Samuel L. Jackson. The completed film will offer definitive evidence, but for now there is reason to give *Episode I* the subtitle of the original *Star Wars* movie: *A New Hope*.

The film is set in an age tipping from medieval to modern, from the doddering aristocracy of the Galactic Republic to the brutal opportunism of the Trade Federation, which has blocked all shipping routes to the planet Naboo. Qui-Gon and his Jedi apprentice, Obi-Wan are dispatched to settle the dispute. Reaching Naboo, they are befriended—hounded, really—by Jar Jar, a disaster-prone outcast of the Gungan race. He leads them to Amidala the Naboo Queen, whom they intend to take to the Republic's assembly in Coruscant. Engine trouble forces them to

detour to Tatooine, where Qui-Gon bargains for spare spacecraft parts with Watto, a potbellied, hummingbird-winged junkman. In Anakin, Watto's slave boy, Qui-Gon senses an unusual precocity, one might almost say a Force. Qui-Gon makes a bet with Watto. If Anakin miraculously wins the big Podrace against the swaggering champ Sebulba, the boy will be freed. Free to chase his destiny as a Jedi knight.

That's one way to start telling the story. Here is another: One day in November 1994, George Lucas dropped his three adopted kids off at school. He came home, climbed the stairs to his study, got a pad of yellow ruled paper and a box of Ticonderoga No. 2 pencils. And in the same binder in which he wrote the original *Star Wars*, he got to work on *The Phantom Menace*.

In early 1996, Lucas invited a few



DRESSED TO THRILL: Queen Amidala (Portman), resplendent in white beads, comes to beg for help from the duplicitous Senator Palpatine



RACE FOR FREEDOM: Anakin, in his homemade Pod with F-16-style engines, maneuvers to overtake the alien front runner Sebulba

trusted souls from Industrial Light & Magic, his 14-Oscar-winning special-effects unit, up to his Skywalker Ranch, north of San Francisco, and showed them 3,500 storyboards for the new film. Battle scenes, racing scenes, parades—all with thousands of characters in each shot and all to be computer generated. "Crew members said, 'It's too many shots. How are we going to do this?'" recalls ILM visual-effects supervisor John Knoll. "It was kind of scary."

The lesson in the making of *Episode I* was learning the difference between the impossible and the merely never-before-done-or-imagined. That's how an army of workaholics helped create three new computer-generated worlds, 1,200 costumes, 65 standing sets, 140 new beasties. To research Podracer vehicles, they went to the world's largest jet junkyard, outside

Phoenix, and scavenged for 747 engines. They thought big (a Russian military-transport plane flew the Podracers to the Tunisian location) and cheap (a woman's electric shaver serves as a Jedi comlink; the waterfalls in Naboo are... salt).

Making the original *Star Wars* trilogy, Lucas was forever frustrated that existing technology could not translate all his notions into compelling, realistic imagery. Today the whole palette of digital technology is much more subtle and supple; if you can dream it, you can see it. And you can play with a scene—keep reshooting it on the computer, so to speak, until it's perfect. As Lucas puts it, "An artist working on fresco had to paint everything before the plaster dried. Then oils were invented. That's what digital is to movies. You can go out in the real world and paint, then come

back the next day and finish it." To makers of fantasy films, this is a pipe dream come true. "People have been talking about a digital back lot for years," says Dennis Muren, the grand wizard of the ILM staff and a senior visual-effects supervisor on *Episode I*. "But George has done it."

In the end, most of the scenes were digitally created (the final Gungan battle) or enhanced (by extending the standing sets, built only 6 ft. or 7 ft. high, into palaces and Senate chambers). "A typical summer movie has maybe 2,000 shots, with, say, 250 effects shots," says Knoll. *Titanic* had about 500. "This one is backward. Of the 2,200 shots, only about 250 shots are *not* effects shots." There is just one sequence totally untouched by the digitalizers. Hint: watch for the vent.

Long before production began in the



LIGHT FANTASTIC: Qui-Gon and Obi-Wan in the climactic sword fight with the devilish Sith Lord Darth Maul and his double-edged light saber

summer of 1997, two teams hunkered down to realize Lucas' vision. One was the art department, led by Doug Chiang. He and his crew cranked out some 3,000 drawings of planets, cities, swamps, creatures, racing pods, new mechanical versions of storm troopers (Lucas told Chiang to think of the elongated, skeletal shapes of African sculptures—and that did the trick). The Queen's ship is sleek chrome with streaks of yellow and fins inspired by an Art Deco pin. Fine, but would it fly? "Part of my phony-baloney research was to watch a lot of educational TV," says Chiang. "But this is film reality, not reality. Put my plane in a wind tunnel and it would fall apart."

The other crew assembled "animatronics": rough computer designs of the script's scenes using stick figures, artwork, bits of film. "We previsualized the movie," says animator David Paul Dzoretz, who was in charge of the digital whiz kids. "We're Lucas' toy box. We do lots of experimentation." Thanks to these sages and sprouts, 45 min. of *Episode I* was viewable as a computerized storyboard before principal shooting began.

Iain McCaig, a children's book illustrator, "conceptualized" the costumes—and some of the creatures inside them. For Darth Maul, the dark-side warrior who

battles Qui-Gon with a prototype double-edged light saber, Lucas asked McCaig to draw his childhood nightmare come true. The artist drew one so frightening that Lucas said, "Do your second worst." That was Bozo the Clown, who had terrified McCaig as a child. "His face had long red tassels, and he had big metal teeth."

McCaig admits he tried "to get Lucas in trouble over the hair" by designing coiffures every bit as grotty as Princess Leia's bagel buns. One of Amidala's dos looks like a fan belt, another like huge shoulder pads. He designed Amidala's raiment to be elaborate too. "George wanted the Queen so regal she could sneak out the back of the dress," he says, "and no one would know she was gone." Trisha Biggar spent a year fashioning the costumes. "It's George's first costume drama," she says. "The movie will have lots of girl appeal, especially the Queen's costumes. She has a different fancy dress for each of her eight scenes." The throne-room dress alone took two months to complete and features globules of lights around the hem. It's a wowsa.

In a movie world of many worlds, where humans interact with other intergalactic species, it just makes sense that live action should consort with puppeteering (Yoda is still voiced and manipulated by Frank Oz) and digital auteurism. So,

yes, there must be real actors. It takes a real actor to stand on a bare stage and pretend it's the gigantic Galactic Senate, or to have an argument with an invisible junkman. And it takes a trusting actor to endure the secrecy attending a *Star Wars* production.

"It had to be a leap of faith," says Neeson. "I couldn't get a script. Forget Woody Allen—this was like trying to get into Fort Knox. I finally got to read the whole script in George's office with Darth Vader standing outside the door. Seriously." Even now, Neeson won't talk about his role, though everyone knows he's the lead in *Episode I*. "I can't say," he says, unsmiling but with a flick of laughter in his eyes. "I am forbidden by my Jedi code of ethics."

To Alfred Hitchcock, actors were cattle. To Lucas, actors are pixels—visual elements whose performances can be refined in computerized postproduction. For a certain scene, Lucas liked Take 4 of one actor, Take 6 of the other; he patched the two together and digitally fixed the middle. "Most directors wouldn't manipulate the scenes as much as we've done," says film editor Paul Martin Smith. "If we don't like how it looks, we change it."

Computer-generated creatures are actors too, and *Episode I* has some of potential Oscar caliber. Watto growls and connives with the swagger of a con man



GUNGAN DIN: The frog-faced warriors of Naboo, shields at the ready, prepare for invasion by the daunting droids of the Trade Federation

who's not as smart as he thinks. Sebulba, Anakin's rival in the Podrace, walks on his hands and throttles rivals with his feet. "George said, 'Think of a spider crossed with an orangutan crossed with a sloth,'" recalls Rob Coleman, the film's animation director. Coleman would pester Lucas for backstory on obscure creatures like Sebulba, "but I've never been able to stump him. He marinates in this world of his."

Of all his "actors," Lucas is proudest of the digital Jar Jar: "We have the first photo-realistic character that acts." Jar Jar, for whom actor-dancer Ahmed Best was both the voice and a rubberized stand-in, took years to develop. "He was Tex Avery cartoonish in style," says Chang, "with large eyes and a big mouth." He was given short ears, but Lucas insisted on long ones. The comically androgynous shape came later.

It takes a village to make a movie: all those artists prying the *Phantom* menagerie out of Lucas' brain. The film had tens of thousands of visual elements, and Lucas signed off on all of them; he would stamp "O.K." or "Fabuloso" on the designs he liked. "George is very collaborative," says Rick McCallum, who produced *Episode I*. "But finally it's his word, his world."

The Emperor of this teeming, hugely profitable world can hear the occasional renegade whisper below his palace balcony.

"Critics say the problem with George and Steven [Spielberg] is that they've created these well-made megamovies that are basically B movies," Lucas observes. "Jaws, they say, was just a big horror movie. *Star Wars* just a big sci-fi film. That our films are not like *The Exorcist*, *The Godfather* and the great films of the '70s. Well, they were B movies too. And *Gone With the Wind* was just a soap opera." Lucas thinks of himself as a Marin County rebel against the Hollywood empire, in a cadre of Bay Area filmmakers that includes Francis Coppola, Philip Kaufman and such visionary avant-gardists of the '60s as Bruce Conner, Will Hindle and Scott Bartlett (his shorts *Offon* and *Metanomen* ushered in the digital era).

All right, what powerful man doesn't also want to be universally respected and loved? But now, sitting in a dark theater at ILM looking at his near-finished film, Lucas seems bracingly lighthearted. "What's that? White dirt on the print?" he asks. "Yeah, that's good dirt," says a wiseacre, and everybody laughs. Lucas is a genius at fussing: a sun is setting too fast in one shot, while in others, he wants light rays bouncing off buildings, more traffic, less confetti. No one acts cowed by the billionaire boss.

Four-and-a-half years of energy and expertise guarantee nothing. *Episode I* may be no more than what composer John

Williams, who has scored all four *Star Wars* films, expected the first one to be: "a good weekend movie." To be a big success, a movie need only work for a few weekends. It doesn't need mythic meaning; remember that for years, the all-time box-office champ was *The Sound of Music*. But the *Star Wars* saga does touch a deeper chord. "George created a transgenerational phenomenon that's still inexplicable," says Williams. "Maybe it's in the rattling of our collective memory."

McCallum thinks he knows the secret. "The story is meaningful," he says, "simply because there's an age of longing that people go through. That's what the story is about—longing, yearning. We ask ourselves, 'What's next? Can I be the person I want to be?' For some, the dream comes true. For some, it doesn't. We look at the story of Anakin Skywalker, and it makes us wonder. Is that just a cast of the die? Is it our character? Is it luck?"

It is luck, as in Luke. And Luke, as in Lucas. Sixteen years ago, he filmed the end of his space story. Now, finally, he sits at the bedside of the child inside every moviegoer, lowers the lights and tells us the beginning. "A long time ago, in a galaxy far, far away" really means, "Once upon a time, in your dreams..."

—Reported by Cathy Booth/Skywalker Ranch

C I N E M A

MOYERS: Joseph Campbell once said all the great myths, the ancient great stories, have to be regenerated in every generation. He said that's what you are doing with Star Wars. You are taking these old stories and putting them into the most modern of idioms, the cinema. Are you conscious of doing that? Or are you just setting out to make a good action-movie adventure?

LUCAS: With Star Wars

I consciously set about to re-create myths and the classic mythological motifs. I wanted to use those motifs to deal with issues that exist today. The more research I did, the more I realized that the issues are the same ones that existed 3,000 years ago. That we haven't come very far emotionally.

MOYERS: The mesmerizing figure in The Phantom Menace to me is Darth Maul. When I saw him, I thought of Lucifer in Paradise Lost or the devil in Dante's Inferno. He's the Evil Other—but with powerful human traits.

LUCAS: Yes, I was trying to find somebody who could compete with Darth Vader, who is now one of the most famous evil characters. So we went back into representations of evil. Not only the Christian, but also Hindu and other religious icons, as well as the monsters in Greek mythology.

MOYERS: What did you find in all these representations?

LUCAS: A lot of evil characters have horns. [Laughs.]

MOYERS: And does your use of red suggest the flames of hell?

LUCAS: Yes. It's a motif that I've been using with the Emperor and the Emperor's minions. I mean, red is an aggressive color. Evil is aggressive.

MOYERS: Is Darth Maul just a composite of what you found in your research, or are we seeing something from your own imagination and experience?

LUCAS: If you're trying to build an icon of evil, you have to go down into the subconscious of the hu-

man race over a period of time and pull out the images that equate to the emotion you are trying to project.

MOYERS: What emotion do you feel when you look at Darth Maul?

LUCAS: Fear. You wouldn't want to meet him in a dark alley. But he's not repulsive. He's something you should be afraid of, without [his] being a monster whose intestines have been ripped out and thrown all over the screen.

MOYERS: Is the emotion you wanted from him different from the emotion you wanted from Darth Vader?

LUCAS: It's essentially the same, just in a different kind of way. Darth Vader was half machine, half man, and that's where he lost a lot of his humanity. He has mechanical legs. He has mechanical arms. He's hooked up to a breathing machine. This one is all human. I wanted him to be an alien, but I wanted him to be human enough that we could identify with him.

MOYERS: He's us?

LUCAS: Yes, he's the evil within us.

MOYERS: Do you know yet what, in a future episode, is going to transform Anakin Skywalker to the dark side?

LUCAS: Yes, I know what that is. The groundwork has been laid in this episode. The film is ultimately about the dark side and the light side, and those sides are designed around compassion and greed. The issue of greed, of getting things and owning things and having things and not being able to let go of things, is the opposite of compassion—of not thinking of yourself all the time. These are the two sides—the good force and the bad force. They're the simplest parts of a complex cosmic construction.

MOYERS: I think it's going to be very hard for the audience to accept that this innocent boy, Anakin Skywalker, can ever be capable of the things that we

OF MYTH AND MEN

A conversation between
Bill Moyers and George Lucas on the meaning of
the Force and the true theology of *Star Wars*



CINEMA

know happen later on. I think about Hitler and wonder what he looked like at nine years old.

LUCAS: There are a lot of people like that. And that's what I wonder. What is it in the human brain that gives us the capacity to be as evil as human beings have been in the past and are right now?

MOYERS: You've been probing that for a while now. Have you come to any conclusion?

LUCAS: I haven't. I think it comes out of a rationale of doing certain things and denying to yourself that you're actually doing them. If people were really to sit down and honestly look at themselves and the consequences of their actions, they would try to live their lives a lot differently. One of the main themes in *The Phantom Menace* is of organisms having to realize they must live for their mutual advantage.

MOYERS: Have you made peace with the fact that people read into your movies what you didn't necessarily invest there?

LUCAS: Yes, I find it amusing. I also find it very interesting, especially in terms of the academic world, that they will take a work and dissect it in so many different ways. Some of the ways are very profound, and some are very accurate. A lot of it, though, is just the person using their imagination to put things in there that really weren't there, which I don't mind either. I mean, one of the things I like about *Star Wars* is that it stimulates the imagination, and that's why I don't have any qualms about the toys or about any of the things that are going on around *Star Wars*, because it does allow young people to use their imagination and think outside the box.

MOYERS: What do you make of the fact that so many people have interpreted your work as being profoundly religious?

LUCAS: I don't see *Star Wars* as profoundly religious. I see *Star Wars* as taking all the issues that religion represents and trying to distill them down into a more modern and easily accessible construct—that there is a greater mystery out there. I remember when I was 10 years old, I asked my mother, "If there's only one God, why are there so many religions?" I've been pondering

that question ever since, and the conclusion I've come to is that all the religions are true.

MOYERS: Is one religion as good as another?

LUCAS: I would say so. Religion is basically a container for faith. And faith in our culture, our world and on a larger issue, the mystical level—which is God, what one might describe as a supernatural, or the things that we can't explain—is a very important part of what allows us to remain stable, remain balanced.



ICON OF EVIL: Darth Maul's satanic image is familiar, his power frightening to those in galaxies far or near

MOYERS: One explanation for the popularity of *Star Wars* when it appeared is that by the end of the 1970s, the hunger for spiritual experience was no longer being satisfied sufficiently by the traditional vessels of faith.

LUCAS: I put the Force into the movie in order to try to awaken a certain kind of spirituality in young people—more a belief in God than a belief in any particular religious system. I wanted to make it so that young people would begin to ask questions about the mystery. Not having enough interest in the mysteries of life to ask the question, "Is there a God or is there not a God?"—that is for me the worst thing that can happen. I think you should have an opinion about that. Or you should be saying, "I'm looking. I'm

very curious about this, and I am going to continue to look until I can find an answer, and if I can't find an answer, then I'll die trying." I think it's important to have a belief system and to have faith.

MOYERS: Do you have an opinion, or are you looking?

LUCAS: I think there is a God. No question. What that God is or what we know about that God, I'm not sure. The one thing I know about life and about the human race is that we've always tried to construct some kind of context for the unknown. Even the cavemen thought they had it figured out. I would say that cavemen understood on a scale of about 1. Now we've made it up to about 5. The only thing that most people don't realize is the scale goes to 1 million.

MOYERS: The central ethic of our culture has been the Bible. Like your stories, it's about the fall, wandering, redemption, return. But the Bible no longer occupies that central place in our culture today. Young people in particular are turning to movies for their inspiration, not to organized religion.

LUCAS: Well, I hope that doesn't end up being the course this whole thing takes, because I think there's definitely a place for organized religion. I would hate to find ourselves in a completely secular world where entertainment was passing for some kind of religious experience.

MOYERS: You said you put the Force into *Star Wars* because you wanted us to think on these things. Some people have traced the notion of the Force to Eastern views of God—particularly Buddhism—as a vast reservoir of energy that is the ground of all of our being. Was that conscious?

LUCAS: I guess it's more specific in Buddhism, but it is a notion that's been around before that. When I wrote the first *Star Wars*, I had to come up with a whole cosmology: What do people believe in? I had to do something that was relevant, something that imitated a belief system that has been around for thousands of years, and that most people on the planet, one way or another, have some kind of connection to. I didn't want to invent a religion. I wanted to try to explain in a different way the religions that have already existed. I wanted to express it all.

CINEMA

MOYERS: You're creating a new myth?

LUCAS: I'm telling an old myth in a new way. Each society takes that myth and retells it in a different way, which relates to the particular environment they live in. The motif is the same. It's just that it gets localized. As it turns out, I'm localizing it for the planet. I guess I'm localizing it for the end of the millennium more than I am for any particular place.

MOYERS: What lessons do you think people around the world are taking away from Star Wars?

LUCAS: Star Wars is made up of many themes. It's not just one little simple parable. One is our relationship to machines, which are fearful, but also benign. Then there is the lesson of friendship and symbiotic relationships, of your obligations to your fellowman, to other people that are around you. This is a world where evil has run amuck. But you have control over your destiny, you have many paths to walk down, and you can choose which destiny is going to be yours.

MOYERS: I'm not a psychologist, I'm just a journalist, but it does seem to me there's something autobiographical with Luke Skywalker and his father—something of George Lucas in there.

LUCAS: Oh, yes. There is, definitely. You write from your own emotions. And obviously there are two sides to the redeemer motif in the Star Wars films. Ultimately Vader is redeemed by his children and especially by having children. Because that's what life is all about—procreating and raising children, and it should bring out the best of you.

MOYERS: So while Star Wars is about cosmic, galactic epic struggles, it's at heart about a family?

LUCAS: And a hero. Most myths center on a hero, and it's about how you conduct yourself as you go through the hero's journey, which in all classical myth takes the form of a voyage of transformation by trials and revelations. You must let go of your past and must embrace your future and figure out what path you're going to go down.

MOYERS: Is it fair to say, in effect, that Star Wars is your own spiritual quest?

LUCAS: I'd say part of what I do when I write is ponder a lot of these issues. I

have ever since I can remember. And obviously some of the conclusions I've come to I use in the films.

MOYERS: The psychologist Jonathan Young says that whether we say, "I'm trusting my inner voice," or use more traditional language—"I'm trusting the Holy Spirit," as we do in the Christian tradition—somehow we're acknowledging that we're not alone in the universe. Is this what Ben Kenobi urges upon Luke Skywalker when he says, "Trust your feelings"?

what I've been trying to do in the films. What eventual manifestation that takes place in terms of how they describe their God, what form their faith takes, is not the point of the movie.

MOYERS: And stories are the way to ask these questions?

LUCAS: When the film came out, almost every single religion took Star Wars and used it as an example of their religion; they were able to relate it to stories in the Bible, in the Koran and in the Torah.

KEITH HAMMIE © 1999 TIME INC.

MOYERS: Some critics scoff at this whole notion of a deeper layer of meaning to what they call strictly kid stuff. I come down on the side that kid stuff is the stuff dreams are made of.

LUCAS: Yes. It's much harder to write for kids than it is to write for adults. On one level, they will accept—they don't have constraints, and they're not locked into a particular dogma. On the other side, if something doesn't make sense to them, they're much more critical of it.

MOYERS: So when you write, do you see your audience, and is that audience a 13-year-old boy?

LUCAS: I make these films for myself more than I make them for anybody else. I'm lucky that the things that I believe in and the things that I enjoy and the things that entertain me entertain a large population. Sometimes they don't. I've made a bunch of movies that nobody has liked. So that doesn't always hold true. But I don't really make my films for an audience per se. I'm hoping that a 12-year-old boy or girl will enjoy it. But I'm not dumbing it down. I think I'm making it with enough credibility so that anybody can watch it.

MOYERS: It's certainly true that Star Wars was seen by a lot of adults, yours truly included. Even if I hadn't wanted to pay attention, I realized that I had to take it seriously because my kids were taking it seriously. And now my grandkids take it seriously.

LUCAS: Well, it's because I try to make it believable in its own fantastic way. And I am dealing with core issues that were valid 3,000 years ago and are still valid today, even though they're not in fashion.



THE FORCE WITHIN: More than action heroes, Jedi like Yoda and Obi-Wan Kenobi are spiritual guides

LUCAS: Ultimately the Force is the larger mystery of the universe. And to trust your feelings is your way into that.

MOYERS: One scholar has called Star Wars "mysticism for the masses." You've been accused of trivializing religion, promoting religion with no strings attached.

LUCAS: That's why I would hesitate to call the Force God. It's designed primarily to make young people think about the mystery. Not to say, "Here's the answer." It's to say, "Think about this for a second. Is there a God? What does God look like? What does God sound like? What does God feel like? How do we relate to God?" Just getting young people to think at that level is

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MOYERS: Why are they out of fashion?

LUCAS: Because the world we live in is more complex. I think that a lot of those moralities have been degraded to the point that they don't exist anymore. But the emotional and psychological part of those issues are still there in most people's minds.

MOYERS: What do you mean by the "emotional" side?

LUCAS: The importance of, say, friendship and loyalty. Most people look at that and say, "How corny." But the issues of friendship and loyalty are very, very important to the way we live, and somebody has got to tell young people that these are very important values. Young people are still learning. They're still picking up ideas. They are still using these ideas to shape the way they're going to conduct their lives.

MOYERS: How do you explain the power of film to move us?

LUCAS: It takes all the aspects of other art forms—painting, music, literature, theater—and puts them into one art form. It's a combination of all these, and it works on all the senses. For that reason it's a very alluring, kind of dreamlike experience. You sit in a dark room and have this other world come at you in a very realistic way.

MOYERS: Wendy Doniger, who is a scholar of mythology at the University of Chicago, says that myths are important because they remind us that our lives are real and our lives are not real. We have these bodies, which we can touch, but we also have within us this omnipotent magical world of thought. *

LUCAS: Myths tell us these old stories in a way that doesn't threaten us. They're in an imaginary land where you can be safe. But they deal with real truths that need to be told. Sometimes the truths are so painful that stories are the only way you can get through to them psychologically.

MOYERS: Ultimately, isn't Star Wars about transformation?

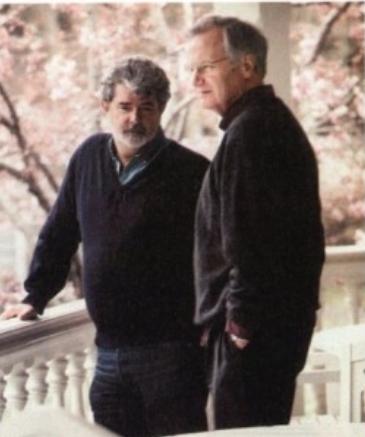
LUCAS: It will be about how young Anakin Skywalker became evil and then was redeemed by his son. But it's also about the transformation of how his son came to find the call and then ultimately realize what it was. Because Luke works

intuitively through most of the original trilogy until he gets to the very end. And it's only in the last act—when he throws his sword down and says, "I'm not going to fight this"—that he makes a more conscious, rational decision. And he does it at the risk of his life because the Emperor is going to kill him. It's only that way that he is able to redeem his father. It's not as apparent in the earlier movies, but when you see the next trilogy, then you see the issue is, How do we get Darth Vader back? How do we get him back to that little boy that he was in the first

offer, I am taken back to the story of Satan taking Christ to the mountain and offering him the kingdoms of the world, if only he will turn away from his mission. Was that conscious in your mind?

LUCAS: Yes. That story also has been retold. Buddha was tempted in the same way. It's all through mythology. The gods are constantly tempting. Everybody and everything. So the idea of temptation is one of the things we struggle against, and the temptation obviously is the temptation to go to the dark side. One of the themes throughout the

films is that the Sith lords, when they started out thousands of years ago, embraced the dark side. They were greedy and self-centered and they all wanted to take over, so they killed each other. Eventually, there was only one left, and that one took on an apprentice. And for thousands of years, the master would teach the apprentice, the master would die, the apprentice would then teach another apprentice, become the master, and so on. But there could never be any more than two of them, because if there were, they would try to get rid of the leader, which is exactly what Vader was trying to do, and that's exactly what the Emperor was trying to do. The Emperor was trying to get rid of Vader, and Vader was trying to get rid of the Emperor. And that is the antithesis of a symbiotic relationship, in which if you do that, you become cancer, and you eventually kill the host, and everything dies.



KEEPING THE FAITH: Lucas and Moyers, at Skywalker Ranch, weigh the power of old stories in a new form

movie, that good person who loved and was generous and kind? Who had a good heart.

MOYERS: In authentic religion, doesn't it take Kierkegaard's leap of faith?

LUCAS: Yes, definitely. You'll notice Luke uses that quite a bit through the film—not to rely on pure logic, not to rely on the computers, but to rely on faith. That is what that "Use the Force" is, a leap of faith. There are mysteries and powers larger than we are, and you have to trust your feelings in order to accept them.

MOYERS: When Darth Vader tempts Luke to come over to the Empire side, offering him all that the Empire has to

MOYERS: I hear many young people today talk about a world that's empty of heroism, where there are no more noble things to do.

LUCAS: Heroes come in all sizes, and you don't have to be a giant hero. You can be a very small hero. It's just as important to understand that accepting self-responsibility for the things you do, having good manners, caring about other people—these are heroic acts. Everybody has the choice of being a hero or not being a hero every day of their lives. You don't have to get into a giant laser-sword fight and blow up three spaceships to become a hero. ■

Bill Moyers' upcoming PBS specials will include Free Speech for Sale on June 8 and Fooling with Words in the fall

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Still Loving Him Madly

Duke was born 100 years ago. His music is as fresh as it ever was

By CHRISTOPHER JOHN FARLEY

TIS DUKE ELLINGTON'S 100TH ANNIVERSARY, and here he is at Pottery Barn, sitting on the counter. Pottery Barn, like many other retail chains these days, is selling a variety of CD collections showcasing the kind of music it would like you to associate with spending. One of its offerings is *PB Swing*, featuring songs by '90s swing acts with one-hit-wonderish names like the Flying Neutrinos. But there's also one track, *Take the "A" Train*, by the Duke Ellington Orchestra. One wonders if the differences—and connections—between Duke and the new crop aren't lost in a blur of consumerism and retro-hipness.

In any case, happy birthday, Duke. Edward Kennedy ("Duke") Ellington—pianist, bandleader, composer, swinger and genius—was born on April 29, 1899, in Washington. His centenary is being marked in large and small ways, with the release of several boxed sets, including RCA Victor's impressive and intimidating 24-CD *Duke Ellington Centennial Edition* (out April 27). For fans whose CD players can't accommodate two-dozen discs at a time, there's the satisfactorily concise single CD *The Best of the Duke Ellington Centennial Edition*. Other tributes range from last week's posthumous Pulitzer citation to the more than 400 commemorative events scheduled by



THE BIG MAN OF BIG BANDS:
Ellington's complex songs set
a standard for jazz composers

Jazz at Lincoln Center in New York City, which is headed by trumpeter and Ellington enthusiast Wynton Marsalis.

Thirty years ago, in an essay titled "Homage to Duke Ellington on His Birthday," novelist Ralph Ellison posed these questions: "How many generations of Americans, white and black, wood their wives and had the ceremonial moments of their high school and college days memorialized by Ellington's tunes? And to how many thousands has he defined what it should mean to be young and alive and American?" Today, at a time when neo-swing and the Big Band sound have become trendy, even bursting forth from commercials for the Gap and Burger King, it's worth pondering how much of Duke's legacy lives on in swing.

Ellington knew how to mold a memorable melodic theme—check out a rendition of his *In a Sentimental Mood* (the version on the 1962 album *Duke Ellington & John Coltrane* is particularly enchanting). But Ellington was determined to do more than just write beautiful melodies. He strove to create long, complex compositions exploring social and spiritual themes. Listen to the muted trumpet on *Work Song*, a track on *The Best of the Duke Ellington Centennial Edition*. The notes almost seem to form words. The four-minute selection is from

Black, Brown and Beige, a three-hour work exploring the history of blacks in America. "Our aim as a dance orchestra," Ellington once wrote, "is not so much to reproduce 'hot' or 'jazz' music, as to describe emotions, moods and activities, which have a wide range."

Most of what passes for pop swing these days is content simply to give off heat. Retro acts like the Brian Setzer Orchestra, Big Bad Voodoo Daddy and Cherry Poppin' Daddies create swing that owes more to rock than jazz; it's propelled by attitude, sometimes fueled by electric guitars and focused more on excitement than enlightenment. Much of today's pop swing is also burdened by irony—many acts seem to be sending the genre up even as they get down.

Duke's true heirs are jazzmen like Marsalis and Harry Connick Jr., performers with a palpable love of swing and jazz tradition. Marsalis, like Duke, has composed works for Big Bands that take on cultural themes. And Connick, who has a swing CD due out titled *Come by Me*, has a sense of style that fits in comfortably with Ellington's aesthetic.

The critic and novelist Albert Murray once wrote that Ellington's music "was created for the express purpose of becoming an integral—nay, indispensable element—of the nation's most basic equipment for everyday existence." Duke's music was too connected to day-to-day life for it to be confined to history and centenaries. Known for writing compositions that were tailored to the talents of specific members of his band, Duke brought their voices into his own. The neo-swing craze will come and go; it may be going already. But years into the future, musicians will continue to find themselves in Ellington. ■



THE REAL THING Connick, left, has an Ellingtonian sense of style; Marsalis, like Duke, is out to create masterworks



CAROL FREEMAN



CHRIS KLEIN/REED AND ANTHONY



ANTHONIO BORGES/REED AND ANTHONY

THE RETRO FLING Setzer, left, can rock, but lacks gravitas; you can dance to Cherry Poppin' Daddies, but there's not much to think about

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A Different Journey

His debut novel was a big success. Can David Guterson do it again?

By PICO IYER

DAVID GUTERSON IS AMONG THE least trendy of writers. The protagonist's mother in Guterson's new novel, *East of the Mountains* (Harcourt Brace; 277 pages; \$25), believes "we know ourselves through the work we do"; she speaks against lowering standards at apple-packing conferences. Guterson, known for his flannel shirts and the home schooling of his four children, was until recently a high school teacher who cited as his inspiration the schoolroom classic *To Kill a Mockingbird*. But in the midst of this unprepossessing existence, his meticulously researched yet crackling debut novel, *Snow Falling on Cedars* (1994), became one of the fastest-selling literary novels of the decade, moving more than 2.5 million copies in paperback even as it won critical prizes. (The movie version will be released this fall.)

The result is that his modest, strikingly unguarded second novel, a simple story of decency and wandering, has been subjected to the kind of buildup generally reserved for the memoirs of presidential mistresses. Still living in an old house on an island in Puget Sound, Guterson says he felt no pressure from having to live up to his miraculous debut and the succeeding five years of expectations. "I'm scared enough when I sit down to write," he says disarmingly, "that there isn't a lot of extra freight that goes with having a best-selling novel behind me." Besides, *East of the Mountains* was started before *Snow Falling on Cedars* had fallen onto nearly every bedside table. Yet the fact remains that bookstores are filled with 500,000 hardbound copies of a novel whose main virtue is its uneventful drift.

Rainwater fresh and palpable as crinoline, *East of the Mountains* tells the story of Ben Givens, a retired heart surgeon in Seattle who has recently lost his beloved wife of 50 years, Rachel, and has



NATIVE SON A lifelong resident of Seattle, the author lovingly chronicles the grandeur of the Northwest

been told he has terminal cancer. Pragmatic to the core, he puts his dogs into his car, collects his father's gun and, on a rainy October morning, sets off toward central Washington to shoot himself. Almost instantly, though, he smashes his car and, surviving by a miracle, finds himself a scary-looking vagabond on the loose. All he has to sustain him are the kindness of strangers and the resources of his spirit and the earth.

As Ben stumbles through the autumn landscape—"the prairie smelled of sage and of the dampness held in the earth"—he goes back in memory to his boyhood days of picking apples, his teenage courtship of Rachel, his service in Italy during World War II. Though the narrative is as vagrant as *Snow Falling on Cedars* was rooted, Guterson's gift for spinning atmospheric spells has not deserted him, and moment after moment flashes into life with the quick vividness of a photograph: the men in war going

out "in mattress covers sewn into snow tunics and in creepers made of tightly knotted rope," the young couple romancing as "the apples hung heavy in the late-day sun, the leaves stirred in the wind." The danger in such textured simplicity, though, is that the book can seem not quite spare enough for parable, yet not quite fleshed out enough for nuanced moral drama.

Its protagonist, in fact, is really the land itself, and Washington State will never have a more loving chronicler than Guterson, a life-long Seattleite who names every tree and evokes, with arresting grandeur, the sound of a coyote's distant howl, or a boy's delight in rivers and horses. With its old-fashioned words like surcease and travail and its unembarrassed talk of caring, Guterson's story becomes a kind of affirmation of open-hearted faith. Ben sees a mountain goat running, and he "felt poised on the cusp of the world, as close to God as he might ever get, with no place higher but heaven itself."

East of the Mountains is best read, perhaps, as a kind of firelit Steinbeck Western about how a deliberate man learns the virtues of having his plans overturned and comes to embrace a life he'd all but given up on. Some readers may find the novel a little too sweet-spirited and lacking in a strong enough sense of evil to make the triumphs of goodness seem earned. Yet as a response to best-sellerdom, the book—and its author—has the bravery to strike off in a new direction. The intrinsic difficulties of completing a novel, says Guterson, "pose enough problems without letting yourself get distracted by external problems." Nonetheless, the fact remains that if *East of the Mountains* were coming out under regular circumstances, it would probably be regarded as a worthy excursion from a deeply serious and accomplished craftsman. With a \$500,000 marketing budget attached, it may look like a disappointment. —With reporting by Andrea Sachs/New York



“Ben ... felt poised on the cusp of the world, as close to God as he might ever get, with no place higher but heaven itself”

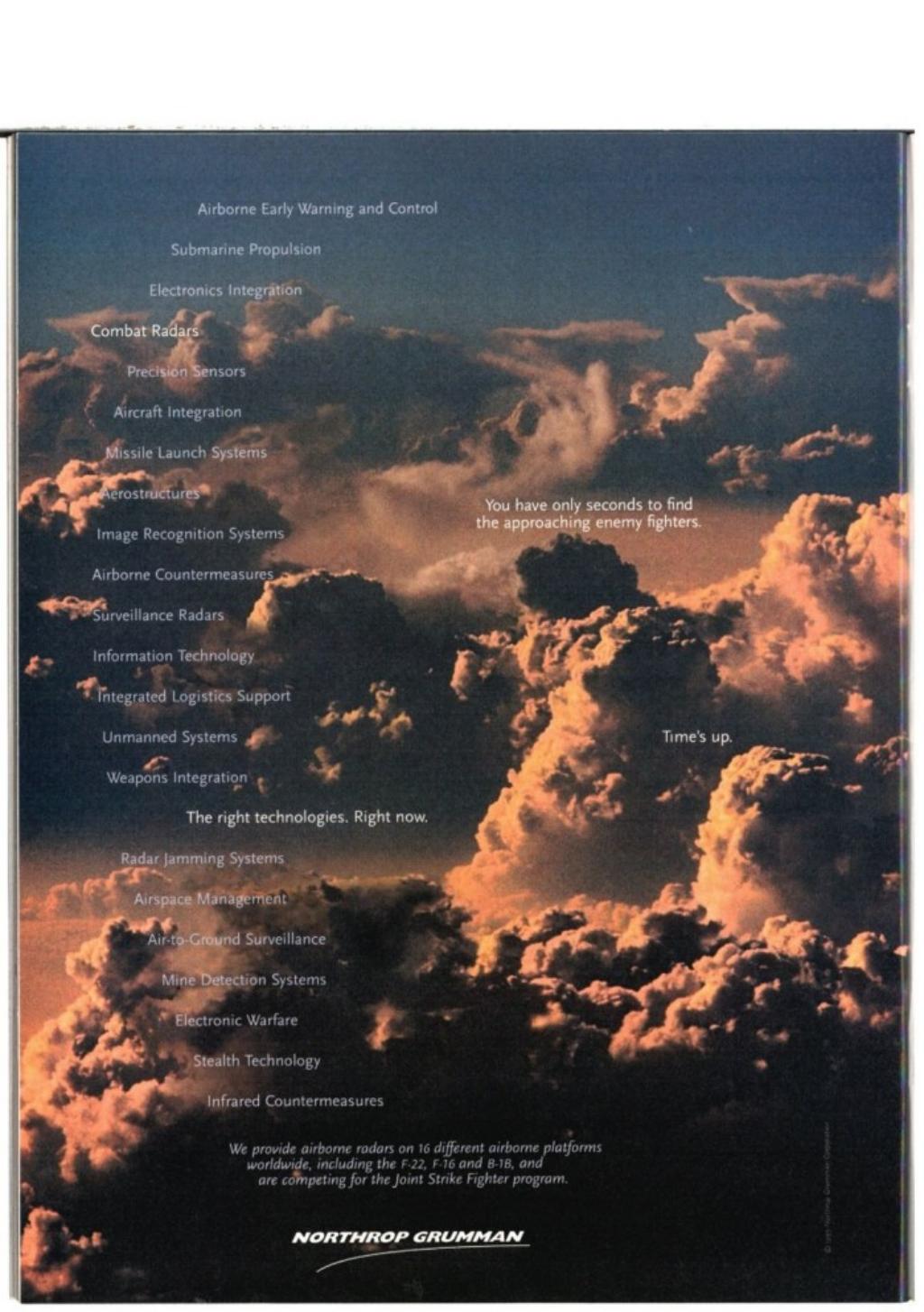
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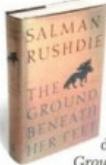
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NORTHROP GRUMMAN

BOOKS

Ganja Growing in the Tin

Salman Rushdie reimagines Orpheus as a modern rock star, and almost brings it off

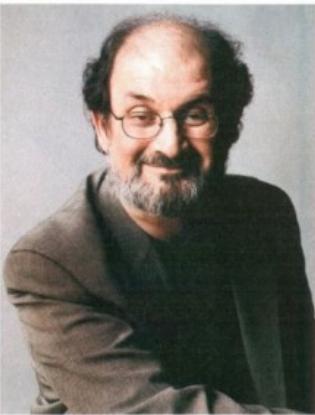


IT MUST HAVE SEEMED like a good idea at the onset: Why not retell the mythic story of Orpheus and Eurydice, this time casting the principals as international pop/rock stars? Ergo Salman Rushdie's sixth novel, *The Ground Beneath Her Feet* (Henry Holt; 575 pages; \$27.50), which recounts the fabulous lives and careers of the singer-composer Ormus Cama and his beloved co-vocalist Vina Apsara, as remembered by their mutual friend, the news photographer Umeed ("Rai") Merchant. His opening sentence foretells Vina's death—she was swallowed up by an earthquake in Mexico in 1989—and Rai presents himself as a narrator with a mission: "I have chosen to tell our story, hers and mine and Ormus Cama's, all of it, every last detail, and then maybe she can find a sort of peace here, on the page, in this underworld of ink and lies, than respite which was denied her by life."

That "all of it, every last detail" seems a tad superfluous; readers who haul this hefty novel onto their lap will already have guessed that they're in for a long trek. And for quite a while the journey seems enchanting indeed. Rai's account of his and Ormus' Bombay childhood becomes a pageant of Dickensian, subcontinent eccentricities, particularly the boys' diversely obsessed parents.

Ormus shows weird promise as a young man. For complicated reasons, he is able to go into trances and somehow hear popular songs two years, eight months and 28 days (or 1,001 nights) before anyone else in the world. Ormus has a problem receiving the lyrics ("The ganja, my friend, is growing in the tin; the ganja is growing in the tin"), but no one doubts that he possesses a peculiar gift, least of all Vina Apsara, who meets Ormus in a record store and realizes that the two of them will make beautiful music together. Rai explains: "For she is—will be—Dionysiac, divine, and so is—so will—he."

Bombay is obviously too small to hold these two myth-destined figures, and Rai decides to get out as well ("Disorientation: loss of the East," as he notes several times.) But this exodus considerably saps the narrative vigor of Rushdie's novel. On their arc toward pop immortality, Ormus and Vina must inevitably pass through London in the mid-'60s and Manhattan in the '70s, already overstuffed stories and times about which Rai (and Rushdie) can find little new or interesting to add. When fictionalized ver-



A LONG TRIP from Dickensian Bombay to Warhol

sions of Rudolf Nureyev and Andy Warhol start popping up, an inspired fiction dwindles toward gossip.

No novelist currently writing in English does so with more energy, intelligence and allusiveness than Rushdie. Nearly every page of *The Ground Beneath Her Feet* offers something to arrest a devoted reader's attention: puns and wordplays galore ("Ma, keep mum"; "Where was a penthouse pent?") and enough literary echoes—of Joyce; Yeats; Frost; Dante; oh hell, of nearly everybody—to keep graduate students on the prowl through these pages for years. But for all of Rushdie's brilliance, the parts of this novel seem greater than the sum of its whole.

—By Paul Gray

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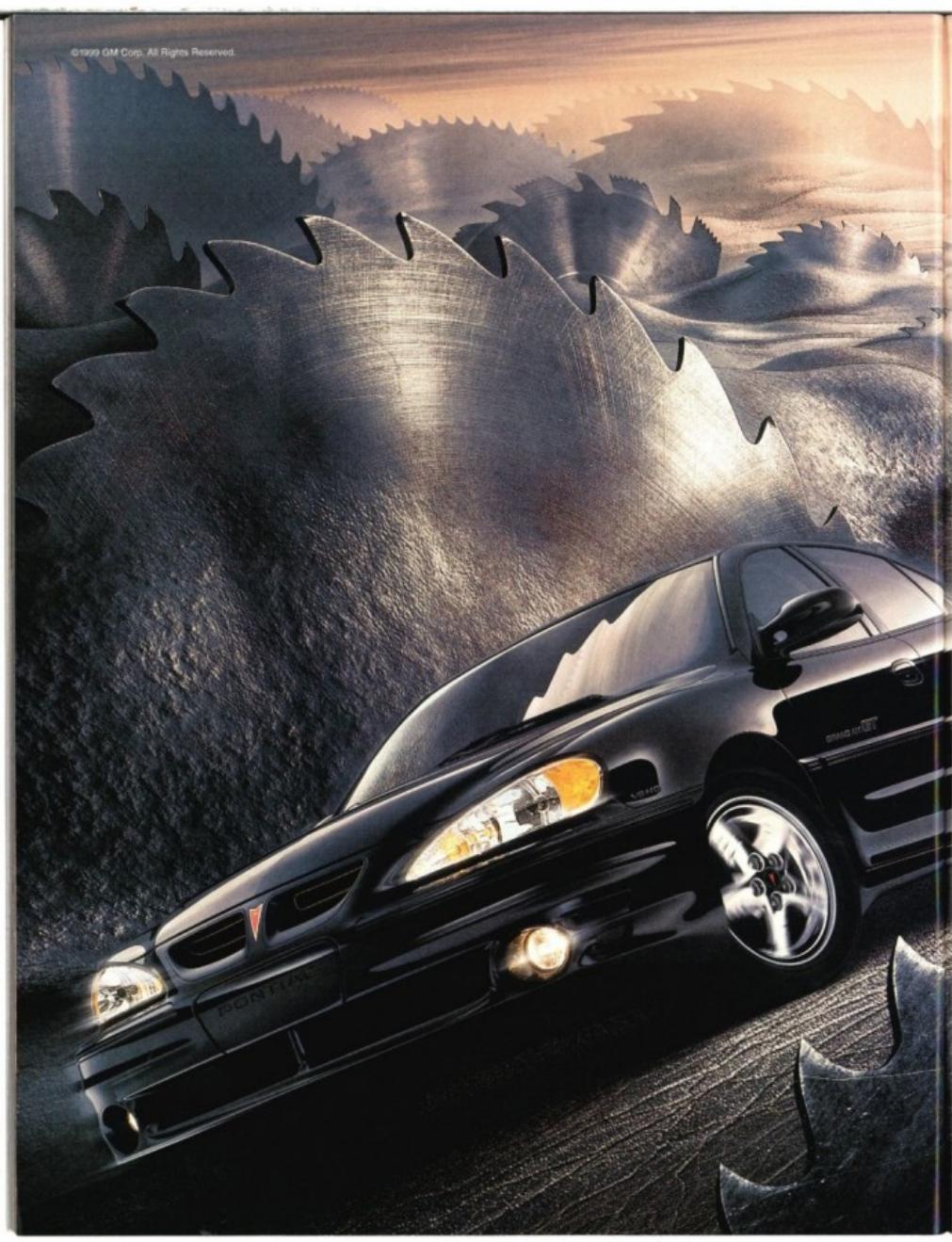
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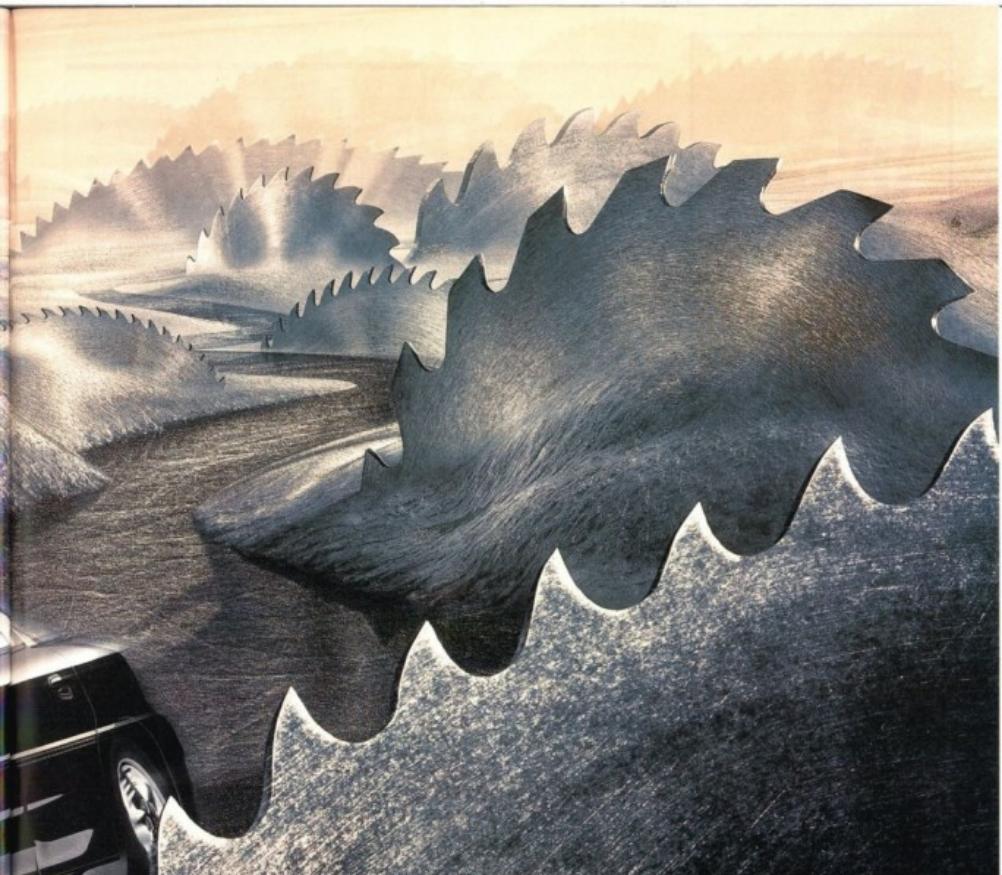
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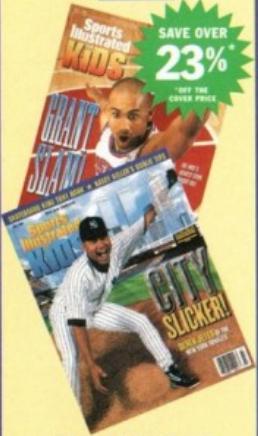
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SHORT TAKES

BOOKS

THE MOTHER, THE SON, AND THE SOCIALITE By Adrian Havill Sante and Kenny Kimes are a walking, talking dime novel. This mother-and-son grifter team has conned, robbed and even enslaved. But the real problem, as an acquaintance observes, is that "the people they deal with keep coming up dead."

The most famous of these may be Irene Silverman. This chunky but engrossing account of the Kimeses' relationship with the wealthy Manhattanite leaves us where the New York Police Department is now: with a seemingly notorious murder, but no body and only circumstantial evidence. Still, the book's catalog of doctored passports and errant blood drops shows why this tale may eventually have a Hollywood ending: life in prison. —By Adam Cohen

Manhattanite leaves us where the New York Police Department is now: with a seemingly notorious murder, but no body and only circumstantial evidence. Still, the book's catalog of doctored passports and errant blood drops shows why this tale may eventually have a Hollywood ending: life in prison. —By Adam Cohen

TELEVISION

THE PERSONALS HBO Signature, April 25

When first-time filmmaker Keiko Ibi claimed her Oscar last month for this



documentary short, she charmed audiences with her unvarnished manner. Clearly, she had a similar effect on her subjects—a group of now single senior citizens living on Manhattan's Lower East Side—who speak with touching candor here about love and loss in the years when middle age is a fond memory. Ibi never patronizes these men and women; she just allows them to wish—and be wistful. —By Gina Bellafante

HOME MOVIES UPN Mondays Sure, there are too many prime-time cartoons on the air, but remember, each new half-hour of



animation means one less lame sitcom. Here the creator of *Dr. Katz* has transformed his motionless SquiggleVision technique into moving animation, and in doing so has sacrificed some of the banter for which the Comedy Central program is known. But this show, about an eight-year-old who makes films and his mother (Paula Poundstone), is more than smart enough to make you wonder why it's on UPN. —By Joel Stein

DANCE

SAVION GLOVER/DOWNTOWN "LIVE COMMUNICATION" Variety Arts Theatre, New York City

It's not often that you get to see an inventor in his laboratory. But encountering Glover in this reprise of a show he did last fall is a little like being with Ford in Dearborn—or, more appropriately, Joyce in Dublin. Freed from the constraints of setting that defined him in *Bring in Da Noise/ Bring in Da Funk*, Glover and a small troupe create a phenomenally entertaining evening that's as emotionally eloquent as it is joyous. If your definition of a creative genius requires that the designee originate a new art, then Glover could be the paradigm. —By Daniel Okrent



CINEMA

TWIN DRAGONS Directed by Tsui Hark and Ringo Lam

Rush Hour won Jackie Chan a lot of friends. They'll want to catch this re-released 1992 comedy in which he plays twins separated at birth; one becomes a famous conductor, the other a rowdy mechanic. Add two girlfriends and some triad intrigue, and you have one of the Chan man's giddiest workouts. Look for cameos by Hark, Lam, John Woo and Kirk Wong—all top action auteurs. But the real fun is in seeing Hong Kong pop cinema at its innocent, crowd-pleasing best. And for Jackie, that goes double. —By Richard Corliss



PHOTOGRAPH BY RICHARD CORLISS



Denver,
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June 3, 1998
4:03 p.m.

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ANDREW ECCLES-MICHAEL

Q+A JOY BEHAR

Joy Behar, a co-host of *The View*, has written her first book, *Joy Shitick*.

Q: My favorite *View* moment was when Meredith Vieira said she didn't wear underwear.

A: She's said it about 10 times already.

Q: That's got to spike the ratings every

time.

A: Yes, it does. She wears panty hose. She just doesn't wear underwear. She thinks it's redundant.

Q: O.K., then. When you were a secretary at *Good Morning America*, you got fired for being mean to callers. What kind of stuff did you say?

A: People would call me and ask, "Where's Joan Lunden?" I'd say, "I don't know where Joan Lunden is."

Q: Now, people must call when you're away. Compared with Joan Lunden, you're much more personal.

A: I tell them stuff about my ectopic pregnancy, and Meredith tells them she doesn't wear underwear.

Q: Which I prefer to the ectopic pregnancy—no offense. You were also an English teacher, right?

A: I had a lot of jobs. I worked at a mental hospital for a while.

Q: How was that?

A: Crazy.

Q: I spoon-fed you that one. Hey, can you get me into the Friar's Club?

A: I can definitely nominate you for the Friar's Club. It's like a gay bar without the cute guys.

Q: That's what I want. Thanks. I think I'm done.

A: I've never seen this thing in TIME magazine. Truthfully, I read Newsweek more.

Q: You know, I don't come in here and tell you that I watch *Rosie*.

A: You know why? Because they give it to me. TIME magazine doesn't give it to me.

Q: You get me in the Friar's Club, I'll

work on this TIME magazine problem.

—By Joel Stein

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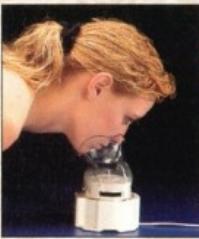


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Daniel Kadlec

Big Gain, Less Pain

With home values rising, see if you've got the equity to dump private-mortgage insurance

HOME VALUES IN THE U.S. ARE UP ACROSS THE BOARD, and some hot areas, including parts of California, Florida, the Carolinas and the Midwest, have seen torrid price increases of 10% to 15% in the past 12 months. Nationally, the median price for existing homes jumped 5% last year, soundly outpacing an inflation rate of less than 2%. Such numbers are heartening for anyone who stretched to buy a home—most of us, right? Yet for anyone who really stretched, buying with less than 20% down, the gains aren't merely

comforting, they're a windfall. This may be their chance to ditch private-mortgage insurance way ahead of schedule.

If you've ever paid PMI you know what a nasty monthly expense it is, totaling up to \$1,000 or more each year. As if your mortgage payment weren't enough to kill you, if you bought with only 5% or 10% down, lenders force you to pony up for a policy that protects them if they end up taking your keys in a weak market and selling at a loss. On the bright side, PMI allows roughly 1 million home buyers each year to move in when they otherwise could not afford it. Still, your goal should be to dump this expense as soon as possible.

In July, federal law will begin making that easier by requiring that mortgage servicers (the folks who send your check to) automatically cancel your PMI policy once you've paid down enough of the loan to have 22% equity in your house. The law also requires that lenders inform you annually of where you stand on this pay-down schedule. Sounds good. But the big miss here is that the law calculates your equity based on purchase price, not market price. So for purposes of ditching PMI, according to law you gain nothing from a rising home value. In case you're wondering, it takes about 11 years of a 30-year mortgage for someone who put down 5% to eliminate PMI by this method. That's not very helpful when you consider that the average home buyer moves in seven years. Another shortfall is that automatic cancellation of PMI applies only to mortgages originated after July of this year. So the one



you're paying right now doesn't qualify. Happily, the two 800 lb. gorillas of the mortgage mart—Fannie Mae and Freddie Mac, one of which probably bought your loan in the secondary market—are filling some gaps. In the next week or so, both will issue guidelines insisting that mortgage lenders and servicers doing business with them automatically terminate PMI on all existing loans halfway through their term. And both will opt not to classify any loan as high risk, as the law allows, for purposes of making certain PMI policies more difficult to cancel.

The best news, though, is old news. Fannie and Freddie, along with many mortgage lenders and servicers, have long-standing policies to drop PMI once a homeowner reaches 20% equity, and they calculate that figure including the value of home improvements and market appreciation. But there's nothing automatic about it. You must ask. You must have a record of making timely payments. And you must pay the fee of \$250 or so for the bank's appraiser to look over your digs. Be conservative; appraisals are often low. If you run into a lender giving you the runaround, threaten to refinance with a competitor—and, with rates still relatively low, consider doing it if you must. Demand action. With home prices popping, your 5% down payment just a couple years ago might amount to 20% of the equity in your house today. ■

See time.com for more on mortgages. Dan's new book is *Masters of the Universe*. See him on CNN/Tuesdays at 12:45 p.m. E.T.

How Fund Mergers Hurt You

More firms like Invesco are trying to bolster faltering, small-cap mutual funds by combining them with winners (382 mergers last year alone), but it may be a losing proposition. To give long-suffering shareholders a boost, it seems, high-flying investors have to take a dive. According to a recent academic study, the performance of the acquiring stock funds, as measured by their objective-adjusted returns (how they fared relative to their peers), tends to drop after they've absorbed all that new cash.

Mutual Fund Mergers

Objective-Adjusted
Return of Acquiring
Stock Funds:



Source: Narayanan Jayaraman, Alan K. Hirsch, and Edward H. Hwang, Georgia Institute of Technology

Is Your Broker Working Hard?

When it comes to selling your home, brokers have always insisted they can get you the highest price. That's right—almost. According to a study by Penn State professor Abdullah Yavas, they sell their own houses for an average of 3% more than they get for their clients. That difference may not mean a lot on a standard 6% commission, but it could help fatten your bottom line. So the next time a broker is putting your home on the market, tell her to price it as she would her own—just a bit more.



Don't Buy a Y2K Bank Account

Computer meltdowns aren't the only threat posed by the Y2K bug. Scam artists are trying to convince people they need to move their money into "Y2K safe" bank accounts, which means giving the crooks the chance to swipe your savings, regulators told Congress last week. Most banks are Y2K compliant—and if not, the FDIC insures each account for as much as \$100,000.

—by Daniel Eisenberg





Michael Lemonick

Fire in the Belly

I thought my heartburn was just a nuisance.
Now I know it could lead to a deadly disease

IT USUALLY STARTS AN HOUR AFTER I EAT: A BURNING sensation that hovers somewhere behind my breastbone. If I have an antacid on hand, the burning subsides.

If not, it builds until I'm in fiery agony. I still remember one awful night 25 years ago, when I ate a greasy lump of fried dough on a train in Yugoslavia. It felt as though I had swallowed a vial of hydrochloric acid. Actually, that's not too far from the truth. The stomach is essentially a bag filled with powerful acid. If it weren't for a lining of protective cells, the stomach itself would dissolve. If the acid stays put, most people never give it another thought. Sometimes, though, it doesn't stay put. Foods like chocolate, mints, caffeine and alcohol relax the esophageal sphincter—a ring of muscle that guards the entrance to the stomach—letting acid bubble up to burn the unprotected esophagus. Smoking and fatty foods like my Yugoslav doughnut can send acid levels soaring.

Most of us call the resulting pain heartburn (though it has nothing to do with the heart). If you get it often, it's called gastroesophageal reflux disease, or GERD. Along with an estimated 15 million Americans, that's what I've had for nearly 30 years. No big deal, though—or so I thought until I read a paper in the *New England Journal of Medicine* a couple of weeks ago. Turns out that this repeated acid bath can alter esophageal cells, creating a condition known as Barrett's esophagus. Once that happens, the cells can become precancerous, then malignant. For someone like me, with almost daily heartburn, the overall risk of esophageal cancer—one of the nastiest cancers—is a horrifying 43 times greater than average.

And so I found myself last week in the examining room of Dr. Robert Meirowitz. Like many of his fellow gastroenterologists, Meirowitz has seen an upswing in patients since the journal article came



If It Strikes Often ...

- **Avoid** smoking, alcohol, caffeine and fatty foods
- **Lose weight** if you need to
- **Don't smoke** before bed
- **Above all**, see your doctor

sounds). If he sees Barrett's, he'll bring me back every year for another look and, if necessary, a biopsy. Under this sort of regimen, my chances of getting cancer will drop dramatically.

In the meantime, I've gone on a so-called proton-pump inhibitor, a new kind of prescription drug that cuts down on acid production. I've also been given a list of changes to make in my life-style. Let's see: I don't drink or smoke or eat fatty foods, so I can't really stop. I'm not obese or even a little overweight, so losing weight won't help. That leaves giving up my beloved caffeine and my even more beloved bedtime snack. We'll see. I'm not making any promises. ■

To learn more, visit the gastroenterology site at www.acg.gi.org. Send questions for Michael Lemonick to mlemonick@aol.com

GOOD NEWS

BOTTOMS UP Here's a reason to belly up to the bar.

A German study shows that moderate amounts of alcohol (one or two drinks daily) can kill off *H. pylori*, bacteria that scientists think cause stomach ulcers. Wine seems to do the job best; those who drank it reduced their odds of an *H. pylori* infection 42%. For beer drinkers, the risk was reduced 25%.

TRAVIS MC CARTHY / STOCK MARKET



THE WRITING CURE Sounds like fiction, but researchers say writing about stressful experiences can improve symptoms in rheumatoid arthritis and asthma patients.

And though patients

wrote only 20 minutes a day over three consecutive days, about half of them experienced positive effects that seemed to last for months. The study is more evidence that the mind plays an important role in chronic illnesses.

BAD NEWS

MATTERS OF THE HEART Sorry guys, but for reasons unclear, among people with advanced congestive heart failure, men don't seem to live as long as women do. According to a new study, they survive only half as long as their female counterparts. Researchers also found that hardening of the arteries is more likely to lead to heart failure in men than in women.

NOT SO SPECIAL DELIVERY

While having a baby is thought to protect a woman against developing breast cancer, a new study suggests that if the child is born prematurely and the mother is over 40, her risk of breast cancer actually goes up 17%. The finding applies to first-time mothers only. What's behind it? Researchers think that the abrupt change in hormones that follows a premature delivery may be partly to blame.



—By Janice M. Horowitz

Sources: *Spine News: Epidemiology* (5/99); *Journal of the American Medical Association* (4/13/99); *Bad News*; *The Lancet* (4/20/99); *Circulation* (4/13/99).



It's the face of Alexine Clement Jackson. Mother, grandmother and national president of the YWCA. At 50, she found out she had breast cancer, a disease that killed her mother when Alexine was only 4. She credits 12 years in remission to her doctors and advanced medicines developed by America's pharmaceutical company researchers. And pharmaceutical researchers will never stop looking for better medicines and ultimately a cure. It gives people like Alexine hope for the future and the future of their families.

America's Pharmaceutical Companies

Leading the way in the search for cures



Anita Hamilton

Virtually Fearless

Do you have fear of flying? I do. A visit to a virtual-reality clinic didn't cure my jitters, but it helped

I'M 33,000 FT. UP IN THE SKY, AND I FEEL FINE. NO sweaty palms, no tingling head; I can finally exhale.

Along with some 25 million other Americans, I'm usually deathly afraid of airplanes. A bounce here, a FASTEN SEAT BELT light there, and I'm ready to start penning my will on a crumpled cocktail napkin. But I'm sick of being scared. So before boarding my last flight, I took a crash course in virtual-reality exposure therapy—a high-tech technique that is supposed to help people like me overcome our fear of flying.

First developed by psychologist Barbara Rothbaum and computer scientist Larry Hodges to combat fear of heights, VR exposure therapy works on the principle that if you can train people to relax in a simulation of a scary situation, they will relax when confronted with the real thing. I visited the Virtually Better clinic in Atlanta, which charges \$150 for a one-hour session. It provides a headset and plane seat that immerse you in a 3-D virtual airplane, complete with vibrations, engine sounds, flight-attendant call bells, and—at touchdown—tire squeals.

O.K., it sounds a little weird, but it can't hurt, right? After all, no matter how scary the high-flying simulation gets, my feet will always be firmly planted on the ground. Before my virtual flight, psychologist Samantha Smith went over a few relaxation techniques: keep breathing, remember that the



ME AND MY HEADSET: The view from above, inside and out

chance of dying in a plane crash is 1 in 10 million and use special tricks to distract myself from my mind's own in-flight horror movies. So far, so good. In fact, when I glanced over at the dorky plastic seat and headset I was about to don, I could barely suppress a snicker. No way was this setup going to scare me, I thought.

I was right. My first

reaction, once I got moving, was, "Wow! This is fun!" I loved how the picture changed onscreen whenever I moved my head. Swinging to the left, I could peer out a window and see the Atlanta skyline; looking up, I saw overhead bins; straight ahead was my pull-down tray and a row of empty seats. Sure, some essential details were missing—bar bags, crying babies, passengers jabbing me with their elbows—but that was O.K. It would have taken a lot more than that to fool me into thinking I was really flying.

At "takeoff," I heard the familiar runway rumbling and felt the vibrations that normally start me chanting, "Dear God, please don't let me die." But this time I felt fine. In fact, I never felt the wheels leave the ground, even though I could see we were supposed to be in the air. As we passed through puffy white clouds, I was so comfortable, I could have taken a nap. I had a sudden craving for a diet Coke, but there wasn't a flight attendant in sight. When the thunderstorms and turbulence came along—the part I secretly hoped would make me scared—the seat simply didn't move violently enough to create that queasy, out-of-control feeling that usually makes me wish I'd packed a parachute.

As I got used to this new world and began talking to the psychologist about my fears, I realized that the simulation was triggering frightening memories without actually making me scared. When I looked at them objectively, my fears seemed to lose their charge. For the first time, I felt safe in a plane. So what if it wasn't real?

Now, back on Delta's B-757 to Newark, just thinking about my session helps me feel at ease. I'm not cured, but I'm definitely calmer.

For more on Virtually Better and other VR clinics, visit virtuallybetter.com. E-mail questions for Anita to hamilton@time.com

Keep the Mouse: Lose the Pad

Track balls and touch pads have come and gone, but the mouse still rules. Now Microsoft's IntelliMouse (\$70, out in September) replaces the gunk-prone ball inside most mice with a tiny digital camera that snaps 1,500 shots per second to track its movements visually. It doesn't need a mouse pad and works on anything but glass—even your lap.



THE BIG SQUEEZE Not a single creature gets cut from the video of *A Bug's Life*

Shrink to Fit: A Bug's Life on Video

When films go from theaters to home video, viewers lose more than hi-fi sound and larger-than-life images: the sides of the wide-screen pictures get lopped off to fit the square TV screen, cutting characters out of scenes and turning dialogues into monologues. But watch *A Bug's Life* on video (\$27), and you'll notice that almost nothing is missing. That's because the film was created entirely on computers, allowing animators to rearrange the ants, grasshoppers and ladybugs digitally to look their best in the new venue. —A.H.



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By MICHELE ORECKLIN



O.J. Bites Hand That Robs Him

Apparently, **O.J. SIMPSON** retains no grudges against the Los Angeles Police Department. Though the former football player and his lawyers excoriated the force during Simpson's 1995 murder trial, it was to the L.A.P.D. that Simpson turned last week after being robbed. Simpson says he was changing shoes in his car following a round of golf when he was approached by an armed man. "This guy looked like a regular solid citizen," he told the Associated Press. "In his 40s, very clean shaven. I might have taken him for an off-duty policeman." Simpson says he bit the man's hand to make him release the gun and, in the struggle, cut his own. As the man fled in his car, Simpson gave chase in his own vehicle and called police. They instructed Simpson to stop the chase when the assailant started running red lights. So far, he is still at large. Hopefully for Simpson, the L.A.P.D. shares his spirit of forgiveness: the incident is being investigated by the same division that looked into the murders of Ronald Goldman and Simpson's ex-wife Nicole Brown.

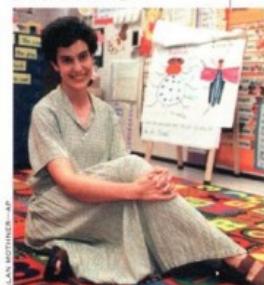


YOU MEAN THEY WEREN'T REAL?

PAMELA ANDERSON LEE is best known for three things: videotaping her honeymoon and having large breasts. But last week, Lee's spokeswoman confirmed that the remarkably cantilevered actress had her breast implants removed. "She wanted her body to go back to its natural state," said Marleah Leslie. She stressed that Lee is unconcerned that the move may negatively affect her career, founded on *Playboy* pictorials and a role on *Baywatch*. It seems that interest in Lee's breasts does remain high. *Ripley's Believe It or Not* has requested the orphaned implants for an exhibit on beauty.

Wit's Beginning

MARGARET EDSON seems less concerned with being the next Eugene O'Neill than making sure a group of five-year-olds has a tidy work space. On learning that she had won the Pulitzer Prize for her play, *Wit*, the Atlanta kindergarten teacher's immediate response was to keep cleaning her classroom. Edson wrote *Wit* in 1991, when she was working at a bicycle shop. The unsentimental story of a woman dying of ovarian cancer wended its way through various regional theaters before ending up off-Broadway six months ago. Edson, 37, says she has no firm plans to write another play and remains dedicated to her current work. She did celebrate: just champagne and pizza, though. After all, she said, "it [was] a school night."



FEUD OF THE WEEK

NAME: "SIR"
CHARLES BARKLEY

AGE: 36

OCCUPATION: Once Round Mound of Rebound

BEST PUNCH: Said of Iverson, "I can't stand that guy. He has to show up for practice every day. He has a responsibility to cut the crap and not have some drama with his coach every day."



NAME: ALLEN "ME, MYSELF & I" IVERSON

AGE: 23

OCCUPATION: Punk with the gift of dunk

BEST PUNCH: Said of Barkley in response: "What has he done? Nothing, but spit on kids, throw people through windows, and talk racist when he has a white wife, and talk crazy about black people. He's nobody."

WINNER IVERSON. WHILE BARKLEY SHOTS OFF HIS MOUTH, IVERSON SCORES

The Great One Skates Away

Wayne Gretzky dominated hockey from his own unique angles

By JOEL STEIN

MORTALITY DOESN'T OFTEN PRESENT ITSELF SO OBVIOUSLY. Last Friday, Wayne Gretzky sat on a dais at Madison Square Garden, watching clips from his childhood and professional career, about to announce his retirement. "Sometimes you go to funerals, and sometimes you get to go to weddings," he said. "And to me, this is a party." Then he stopped himself from crying. "I should take my own advice, huh?"

At best it was a wake. "I played hockey for 35 years, since I was three years old," he said. "It's like suddenly they say, 'Give me your skates. You're done.'" After playing 20 seasons and amassing virtually every scoring record in pro hockey and then some (under "most points in a season," Gretzky holds nine of the top 11 spots), his own aging body asked him to hand in those skates.

Gretzky's career is a bit curious in that he did it backward. You're supposed to rise from obscurity, slowly dominate the sport, overcome adversity and go out on top, like that basketball guy. By the time Gretzky was 10, though, he was featured in a half-hour television special. At 18, his fame was part of the reason the National Hockey League absorbed the upstart World Hockey Association, where Gretzky was playing for the Edmonton Oilers. He had won four Stanley Cup championships with the Oilers by the time he was 27. He married actress Janet Jones in Canada's royal wedding, and a month later was sold to L.A. to teach the Americans about hockey and break his own country's heart. (A clearly troubled Canadian House leader complained that "the Edmonton Oilers without Wayne Gretzky is like *Wheel of Fortune* without Vanna, White.") Gretzky moved again to St. Louis, Mo., and then to New York, but his quest for another Cup would not be fulfilled. The New York Rangers, a mess of a club, have been unable to commit to winning, so Gretzky decided to cut the tragedy short before people started to walk out of the theater.

This is not the first time Gretzky has considered retiring; he talked about it in 1991 and 1993. But each time he has proved too talented; even last year, he led

the league in assists. But this year Gretzky has dealt with persistent neck pain from an injury, and though he's the best player on his team, he has seen his skills deteriorate. After beating the Rangers earlier this year, Buffalo Sabre Vaclav Varada said that stopping Gretzky wasn't challenging. The next time the two teams played, Ranger Todd Harvey chased Varada and punched him in the back of the head. This is a hockey player's way of saying the truth is sometimes difficult to take.

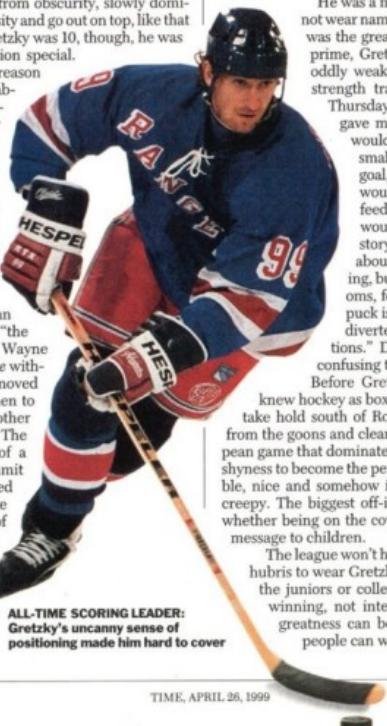
The Great One—a nickname so Arthurian it would have sounded histrionic on any other athlete—tried to avoid a farewell tour, but it came anyway, after the New York Post broke the news of his impending decision last week. His last game in Canada, at Ottawa, became a ceremony, with opposing players each skating over to shake his hand; and the p.a. guy, instead of announcing the three stars of the game as is the custom at every NHL game, called only one—the only real superstar hockey has ever had.

He was a most unlikely one. If the players did not wear names, it would be hard to pick out who was the greatest player of all time. Even in his prime, Gretzky wasn't very fast; his shot was oddly weak, and he was last on the team in strength training. As he said in Ottawa on

Thursday, "Maybe it wasn't talent the Lord gave me. Maybe it was the passion." He would operate from his "office," the small space in back of the opponent's goal, anticipating where his teammates would be well before they got there and feeding them passes so unexpected he would often surprise them. For a cover story in 1985, he told TIME, "People talk about skating, puck handling and shooting, but the whole sport is angles and caroms, forgetting the straight direction the puck is going, calculating where it will be diverted, factoring in all the interruptions." Don't worry. That sounded just as confusing to most NHL players.

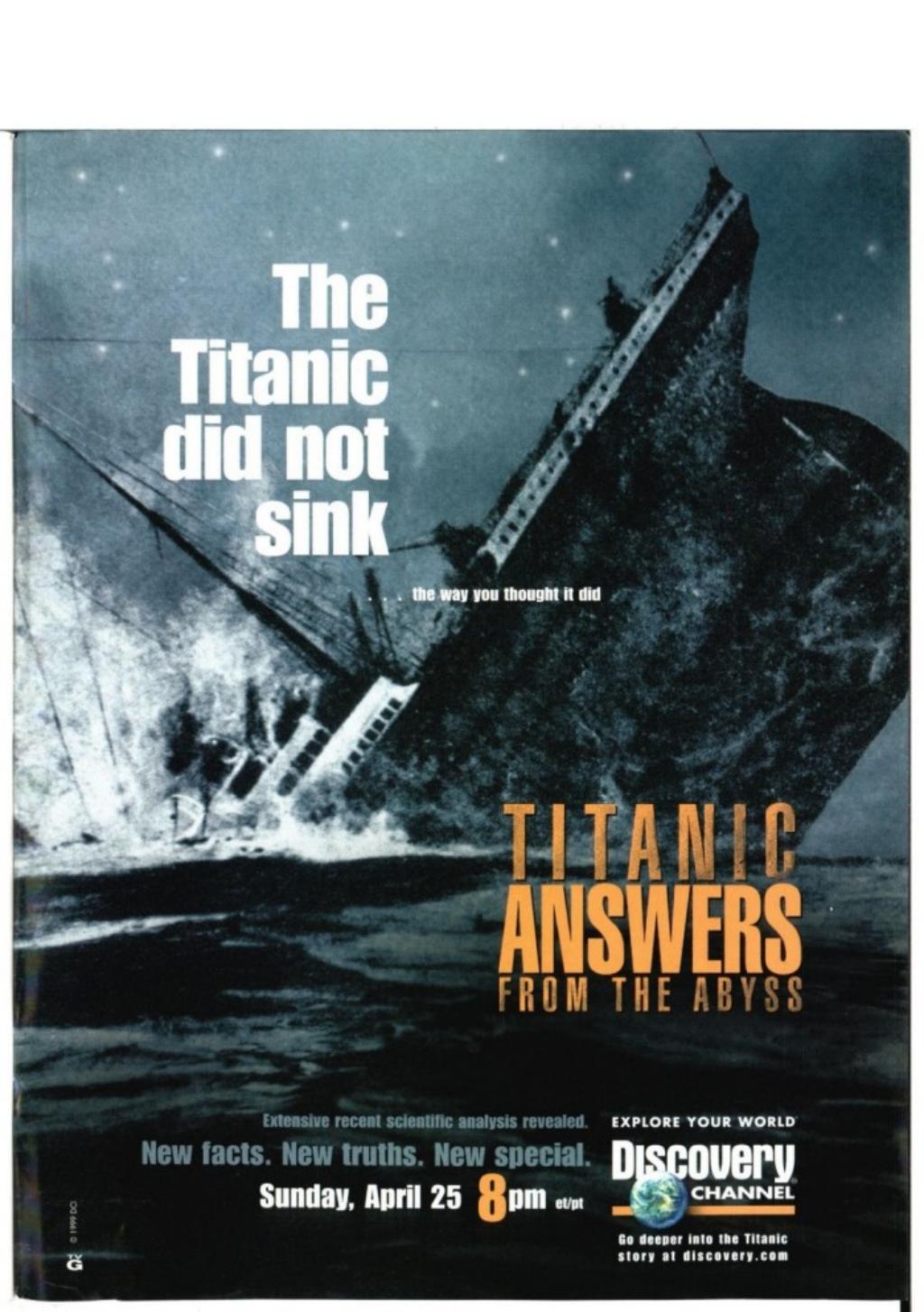
Before Gretzky, back in 1979, America only knew hockey as boxing on ice, a sport that could never take hold south of Route 80. He helped free the game from the goons and clear a path for the more skilled, European game that dominates the NHL today. He overcame his shyness to become the perfect ambassador: humble, accessible, nice and somehow impeccably earnest without being creepy. The biggest off-ice controversy he ever faced was whether being on the cover of *Cigar Aficionado* sent a bad message to children.

The league won't have to retire 99. No one has had the hubris to wear Gretzky's number in the NHL, the AHL, the juniors or college hockey. It has represented not winning, not intensity, but how awesomely subtle greatness can be. And that's not something most people can wear on their backs.



ALL-TIME SCORING LEADER:
Gretzky's uncanny sense of
positioning made him hard to cover

WILLIAM SALAS—CONTRIBUTOR



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